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**Validation of MCNP4a for
Highly Enriched Uranium Using
the Battelle Process Safety and
Risk Management IBM RS/6000
Workstation**

by

Scott B. Negron
Billy L. Lee, Jr.
Robert W. Tayloe, Jr.

January 1996

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UNDER CONTRACT WITH
THE UNITED STATES
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POEF-SH-33

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USING THE BATTELLE PROCESS SAFETY AND RISK
MANAGEMENT IBM RS/6000 WORKSTATION**

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Under Contract 400183

to

LOCKHEED MARTIN UTILITY SERVICES, INC.

PORTSMOUTH GASEOUS DIFFUSION PLANT

P.O. Box 628 Piketon, Ohio 45661

Under Contract USECHQ-93-C-0001

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ABSTRACT

This document has been prepared to allow use of the Radiation Shielding & Information Center (RSIC) release of MCNP4a, which has been installed on the Battelle Process Safety and Risk Management (PSRM) IBM RS/6000 workstation, for production calculations for the Portsmouth Gaseous Diffusion Plant (PORTS). This hardware/software configuration is under the configuration control plan listed in Reference 1.

The first portion of this document outlines basic information with regard to validation of MCNP4a using the supplied cross sections and the additional MCNPDAT cross sections. A basic discussion of MCNP is provided, along with discussions of the validation database in general. A description of the statistical analysis then follows.

The results of this validation indicate that the software and data libraries examined may be used with confidence for criticality calculations at the Portsmouth Gaseous Diffusion Plant (PORTS). When the validation results are treated as a single group, there is a 95 percent confidence that 99.9 percent of future calculations of similar critical systems will have a calculated $k_{\text{eff}} > 0.95$. Based on this result, the Battelle PSRM Nuclear Safety Group has adopted the calculational acceptance criteria that a calculated $k_{\text{eff}} + 2\sigma \leq 0.95$ is safely subcritical.

The conclusion of this document is that MCNP4a and all associated cross section libraries installed on the PSRM IBM RS/6000 are acceptable for use in performing production criticality safety calculations for the Portsmouth Gaseous Diffusion Plant.

1.0 INTRODUCTION

The purpose of this validation is to provide reasonable assurance that the Battelle Process Safety and Risk Management IBM RS/6000 workstation implementation of MCNP4a and all associated cross section libraries are valid for use in the analysis and subsequent evaluation of various plant site activities involving enriched uranium at the Portsmouth Gaseous Diffusion Plant (PORTS).

This validation effort has been patterned after a previous validation study documented in POEF-SH-23 for the Battelle PSRM IBM RS/6000 implementation of the CSAS25 calculational sequence in SCALE-4.2 and the 27 energy group ENDF/B-IV cross section library (Ref. 2). All calculations were performed on the Battelle PSRM IBM RS/6000 workstation. This validation covers the MCNP4a code, the supplied cross-section data set, and the additional MCNPDAT cross section library.

A total of 127 cases, consisting of highly enriched systems ($>90\%$ ^{235}U) were run. These cases consisted of various UO_2F_2 and $\text{UO}_2(\text{NO}_3)_2$ solution systems, oxide-water systems, and several miscellaneous combinations of uranium and moderating materials. All of the executed cases have applicability to operations at PORTS.

The data obtained from the calculations were tabulated and analyzed to determine normality. Based on the statistical analyses, the lower limit for k_{eff} with 95 percent confidence and a 99.9 percent one-sided tolerance is 0.9667. Therefore, for the anticipated range of materials to be encountered at PORTS, the version of MCNP4a (and all cross section libraries used in the validation runs) installed on the Battelle PSRM IBM RS/6000 workstation is safe for production use at PORTS provided $k_{\text{eff}} + 2\sigma$ does not exceed a value of 0.95. The margin between 0.95 and 0.9667 has been adopted as an additional safety margin and to allow for consistence with the value of 0.95 that has been traditionally used.

2.0 CALCULATIONAL PROCEDURE

A complete description of the MCNP4a code package can be found in the RSIC-supplied user manual (Ref. 3). MCNP is a monte carlo neutron and photon transport code which uses combinatorial geometry for the construction of three dimensional models. Mnemonic symbols are used to represent two dimensional geometric surfaces (surface cards), which are combined in the cell cards to form three dimensional regions called cells. The cell cards also contain the material number associated with a mixture of isotopes specified at the end of the input deck.

Cells may be combined in many ways to form complex geometric models. All points outside of the model are located in the universe. Each cell (and the universe) must be assigned an importance, which "weights" all particles entering or leaving the cell. The user must also specify the number of particle histories to be run. For criticality (k_{eff}) calculations starting "source" particles, which initiate all fission neutrons, must also be assigned.

The MCNP executable code reads in the input deck and then begins the problem. Cross sections corresponding to the isotopes specified in the material cards are accessed through a directory (XSLIB), which specifies the file and location within the file for each isotope listed.

3.0 DESCRIPTION OF EXPERIMENTS

Complete descriptions of all experiments can be found in References 4—10. Experiments reported in Reference 4 can be broken up into three general groups:

- 1) Single unreflected cylinders
- 2) Single cylinders reflected from all six sides
- 3) Arrays of cylinders reflected from all six sides

The single cylinders were made of either aluminum, stainless steel, or aluminum with a stainless steel sleeve. Cylinders in arrays were all aluminum, although some experiments used stainless steel sleeves. The reflected experiments were performed inside a cube of reflecting material with an inside dimension of ≈ 122 cm. The reflecting material was either ≈ 27.7 cm of concrete or ≈ 20.6 cm of plexiglass. Uranium concentration varied between ≈ 55 gU/l and ≈ 360 gU/l. The fissile solutions were all uranium nitrate.

Experiments included from Reference 5 were either single spheres or single cylinders, all unreflected. The uranyl nitrate solutions had uranium concentrations that varied between ≈ 14 gU/l and ≈ 28 gU/l. Some experiments used boron as a soluble poison. The spherical container was made of aluminum while the cylindrical ones were carbon steel.

Reference 6 experiments were all 3-D arrays of identical elements. Each element was a 19.04 cm i.d. plexiglass cylinder filled with 5 liters of uranyl nitrate. The uranyl nitrate had a uranium concentration of 415 gU/l. The entire array was either unreflected or reflected on six sides with paraffin of various thicknesses.

Experiments from Reference 7 used parallelepipeds of uranyl fluoride to achieve criticality. Single units as well as two units side by side were considered. A tight fitting

water reflector existed in some instances and a uranium concentration of 94.18 gU/l was used throughout.

Reference 8 experiments consisted of single spheres of uranyl fluoride, one unreflected and the remainder water reflected. Uranium concentration varied between ≈ 20 and ≈ 213 gU/l.

Experiments reported in Reference 9 used cylinders of uranyl fluoride. These experiments are to be distinguished from the others included in this report in that the uranium concentration was extremely high, either 889.46 or 576.95 gU/l. All had a tight fitting water reflector.

Experiments from Reference 10 consisted of arrays of cans of uranium dioxide. Polyethylene, plexiglass and alcohol were used as reflectors, external moderators, and internal moderators, respectively. The uranium was 93.15% enriched. The UO_2 mass per container was either 0.421 kg, 17 kg, or 20 kg.

4.0 MCNP INPUT FILES

A total of 127 individual input files were run for this validation. These files were obtained through the courtesies of C. Crawford and B. Palmer of the Idaho National Engineering Laboratory (INEL). These files were transmitted electronically from INEL to the Battelle PSRM IBM RS/6000. These files are the same ones used for the INEL validation of MCNP documented in Reference 11.

A few minor changes were made in these files to enable them to run on the Battelle IBM. These changes include changing the isotope ZAID for several isotopes used in the INEL files which have been superseded in the latest version of MCNP. An example of this is 25055.50c, the superseded ZAID for manganese 55, being replaced by 25055.51c. Other than superseded ZAIDs, the only other changes were editing a few files to get them all in an 80 column format. No changes were made that in any way effected the accuracy of the models. Although no direct comparison of the results of the Battelle data was made to the INEL data, a cursory comparison shows excellent agreement.

5.0 RESULTS

The resulting eigenvalues obtained from the 127 cases run are listed in Table 1, along with the standard deviation for each input file. The high and low values of k_{eff} are 1.032 and 0.953, respectively. The average value of k_{eff} is 1.004. The corresponding Reference number is listed in parenthesis next to each filename. This reference gives detailed information regarding the corresponding critical system.

Table 1. Validation Data Set Results

FILENAME (Reference)	k_{eff}	SIGMA	FILENAME (Reference)	k_{eff}	SIGMA
GWI01 (5)	0.99839	0.00199	FOX 05 (8)	1.00272	0.00174
GWI02 (5)	0.99106	0.00192	FOX 06 (8)	1.00137	0.00293
GWI03 (5)	0.98591	0.00185	FOX 07 (8)	0.99702	0.00290
GWI04 (5)	0.98779	0.00228	FOX 08 (8)	1.00040	0.00168
GWI05 (5)	1.00527	0.00154	FOX 09 (9)	0.99909	0.00336
GWI06 (5)	1.00904	0.00170	FOX 10 (9)	1.00359	0.00328
GWI07 (5)	1.00322	0.00139	FOX 11 (9)	0.97306	0.00300
GWI08 (5)	1.00451	0.00127	FOX 12 (9)	0.95354	0.00283
GWI09 (5)	0.99559	0.00115	ROT 01 (4)	1.00411	0.00354
MAG01 (10)	1.03188	0.00314	ROT 02 (4)	1.01065	0.00341
MAG02 (10)	1.00505	0.00267	ROT 03 (4)	1.01581	0.00318
MAG03 (10)	0.99835	0.00252	ROT 04 (4)	1.00786	0.00360
MAG04 (10)	0.99873	0.00252	ROT 05 (4)	1.00054	0.00370
MAG05 (10)	0.99032	0.00242	ROT 06 (4)	1.00181	0.00340
MAG06 (10)	1.01180	0.00276	ROT 07 (4)	1.00253	0.00355
MAG07 (10)	0.99577	0.00280	ROT 08 (4)	1.00834	0.00319
MAG08 (10)	1.01570	0.00282	ROT 09 (4)	1.00028	0.00325
MAG09 (10)	0.99733	0.00282	ROT 11 (4)	1.01814	0.00375
MAG10 (10)	1.01058	0.00285	ROT 12 (4)	1.00868	0.00329
MAG11 (10)	1.00252	0.00271	ROT 13 (4)	1.01078	0.00353
MAG12 (10)	0.99917	0.00269	ROT 14 (4)	1.00460	0.00371
MAG13 (10)	0.99107	0.00244	ROT 15 (4)	1.01070	0.00337

FILENAME (Reference)	k_{eff}	SIGMA	FILENAME (Reference)	k_{eff}	SIGMA
MAG14 (10)	1.02213	0.00278	ROT 16 (4)	1.00400	0.00358
MAG15 (10)	1.00530	0.00242	ROT 17 (4)	1.00919	0.00366
MAG16 (10)	0.99589	0.00294	ROT 18 (4)	1.00505	0.00349
MAG17 (10)	0.99488	0.00283	ROT 19 (4)	1.00449	0.00339
MAG18 (10)	0.99905	0.00277	ROT 20 (4)	1.00654	0.00312
MAG19 (10)	0.99504	0.00250	ROT 21 (4)	1.00316	0.00369
MAG20 (10)	1.00048	0.00280	ROT 22 (4)	1.01086	0.00371
FOX01 (7)	0.99935	0.00307	ROT 23 (4)	1.01203	0.00331
FOX02 (7)	1.00190	0.00320	ROT 24 (4)	1.00803	0.00326
FOX03 (7)	0.99300	0.00362	ROT 25 (4)	1.01092	0.00350
FOX04 (7)	1.00567	0.00322	ROT 26 (4)	0.99947	0.00366
ROT27 (4)	1.00228	0.00344	ROT 64 (4)	1.00167	0.00348
ROT28 (4)	1.00636	0.00329	ROT 65 (4)	1.01319	0.00313
ROT29 (4)	0.99491	0.00352	ROT 66 (4)	1.01411	0.00342
ROT30 (4)	1.01064	0.00367	ROT 67 (4)	1.00702	0.00293
ROT31 (4)	1.00103	0.00309	ROT 68 (4)	0.99842	0.00293
ROT32 (4)	1.00601	0.00269	ROT 69 (4)	1.00062	0.00282
ROT33 (4)	1.00735	0.00306	ROT 70 (4)	0.99956	0.00277
ROT34 (4)	1.00447	0.00336	ROT 71 (4)	1.00396	0.00266
ROT35 (4)	1.00329	0.00286	ROT 72 (4)	1.00410	0.00276
ROT36 (4)	1.00782	0.00292	ROT 73 (4)	1.01062	0.00291
ROT37 (4)	0.99906	0.00328	ROT 74 (4)	1.00761	0.00358
ROT38 (4)	1.02456	0.00333	ROT 75 (4)	1.00577	0.00334
ROT39 (4)	1.00767	0.00269	ROT 76 (4)	1.00978	0.00314
ROT40 (4)	1.00626	0.00295	ROT 77 (4)	1.00421	0.00280
ROT41 (4)	1.00862	0.00309	ROT 78 (4)	1.00470	0.00343
ROT42 (4)	0.99989	0.00353	ROT 79 (4)	1.00400	0.00299
ROT43 (4)	0.99437	0.00315	ROT 80 (4)	1.00627	0.00314
ROT50 (4)	1.01107	0.00294	THO 01 (6)	0.99748	0.00379
ROT51 (4)	1.01231	0.00321	THO 02 (6)	1.00382	0.00351
ROT52 (4)	1.01374	0.00319	THO 03 (6)	1.02282	0.00354
ROT53 (4)	1.00622	0.00251	THO 04 (6)	1.03022	0.00329
ROT54 (4)	1.00556	0.00249	THO 05 (6)	1.02464	0.00313
ROT55 (4)	1.00396	0.00343	THO 06 (6)	0.99538	0.00345

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FILENAME (Reference)	k_{eff}	SIGMA	FILENAME (Reference)	k_{eff}	SIGMA
ROT56 (4)	1.00687	0.00311	THO 07 (6)	0.98434	0.00323
ROT57 (4)	1.01244	0.00327	THO 08 (6)	1.00595	0.00321
ROT58 (4)	1.00848	0.00264	THO 09 (6)	1.02781	0.00301
ROT59 (4)	1.00072	0.00348	THO 10 (6)	1.03251	0.00281
ROT60 (4)	0.99534	0.00350	THO 11 (6)	0.99362	0.00336
ROT61 (4)	1.00497	0.00292	THO 12 (6)	0.97328	0.00370
ROT62 (4)	1.00337	0.00310	THO 13 (6)	0.97435	0.00315
ROT63 (4)	1.00371	0.00369			

6.0 STATISTICAL ANALYSES

A cursory review of the data revealed that it appears to approximate a normal distribution. If the data approximate a normal distribution, then standard tabulated one-sided tolerance factors for normal distributions may be applied to calculate the minimum acceptable k_{eff} for the data, k_{min} .

The first step performed on the data was a calculation of the mean, median, and mode. In a perfectly normal distribution, these three values are equivalent. The mean may be calculated from

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i$$

where $N \equiv$ number of data points.

The median is that value where an equivalent number of values fall both above and below it. In the case of ungrouped data, sorted in ascending order, the value of the median may be taken to be the value of the $(N+1)/2$ th item for odd N ; for even N , it is customarily taken as the arithmetic average of the $(N/2)$ th item and the $(N/2 + 1)$ th item.

The mode is defined as that value in a distribution about which the values are most heavily concentrated, and may be calculated by the empirical relation:

$$\text{Mode} = \bar{x} - \sigma \left[\frac{\sqrt{\beta_1} (\beta_2 + 3)}{2 (5\beta_2 - 6\beta_1 - 9)} \right]$$

where:

σ = standard deviation about the mean

$\sqrt{\beta_1}$ = coefficient of skewness

β_2 = coefficient of kurtosis

The mean was then calculated as

$$\bar{x} = 1.00146$$

with

$$\sigma = 0.0107$$

The skewness and kurtosis coefficients were respectively

$$\sqrt{\beta_1} = -0.7915 \quad \text{and} \quad \beta_2 = 4.736$$

The mean was 1.004, the median 1.004, and the mode, calculated from the above equation, was 1.004.

The mean, median, and mode are all identical to 4 significant figures, which is a good indication of normally distributed data.

The skewness coefficient, a measure of the degree of symmetry in a distribution, for a perfectly normal distribution (i.e., or one perfectly symmetric about the mean) would be 0.0. The kurtosis coefficient, a measure of the peakedness in a distribution, for a perfectly normal distribution would be 3.0. The values obtained for this analysis (-0.791 and 4.736) for the skewness and kurtosis coefficients, respectively, are sufficiently close to those expected from a perfectly normal distribution; therefore, it can be considered normally distributed data.

The one-sided tolerance limit for a normal distribution was used to determine the $k_{\min}$ to be applied to the system. For a one-sided tolerance limit for a normal distribution, criticality safety personnel are only interested in estimating a value above which a proportion will lie to a certain confidence level. The value of $k_{\min}$ is then established from

$$k_{\min} = \bar{k} - K^* \sigma$$

where K^* is the tolerance factor. For 95% confidence that 99.9% of the k_{eff} values calculated in future calculations will fall above $k_{\min}$ is $K^* = 3.4836$

$$k_{\min} = 1.004 - 3.4836 (0.0107)$$

$$k_{\min} = 0.9667$$

As stated earlier, to maintain consistency with past operations, $k_{\min}$ will continue to be assumed to be 0.95, with the difference between 0.95 and the calculated $k_{\min}$ being added to the margin of subcriticality.

Bias is defined as the deviation of the calculated values of k_{eff} from unity, or an average bias which is taking the difference between an average of the calculated results and unity. For this validation effort, the bias has been established as

$$k_b = |1 - \bar{k}|$$

which gives $k_b = 0.0038$.

The margin of subcriticality (k_m) can then be calculated based on the following relationship.

$$k_{\min} \leq 1 - k_b - 1.645 k_\sigma - k_m$$

Which is rearranged to give:

$$k_m \leq 1 - k_b - 1.645 k_\sigma - k_{\min}$$

The incorporation of the 1.645 multiplier on k_g is necessary to place the calculation at the one-sided 95% confidence level. Substituting this gives:

$$k_m \leq 1 - 0.004 - 1.645(0.0107) - 0.95 = 0.0284$$

The margin of subcriticality for calculations based on the validation is less than or equal to 0.0284.

7.0 RANGE OF APPLICABILITY

It is considered that this validation covers a vast majority of the various fissile systems found at PORTS, and that it is appropriate to use MCNP4a and all cross sections used in the validation cases to analyze them. Section 3 of this report outlines the range of critical experiments covered in this validation. All types of fuels and moderators, reflectors, and arrays that might be used to evaluate systems at PORTS are exercised in this validation data set. Only high enriched ($>90\%$ ^{235}U) cases were run in this validation. Therefore, only calculations in which the uranium enrichment is greater than or equal to 90 percent can be considered valid for use in criticality safety analysis. All aspects of MCNP's k_{eff} calculational procedures are exercised by the validation data set as well. It is therefore considered that the MCNP package on the Battelle IBM is applicable to criticality evaluation of highly enriched systems which could be found at PORTS.

8.0 CONCLUSIONS

The results of this validation indicate that the PSRM IBM RS/6000 version of MCNP4a may be used with confidence for criticality calculations of high enriched uranium systems at the Portsmouth Gaseous Diffusion Plant. When the validation results are treated as a single group, there is a 95% confidence that 99.9% of future calculations of similar critical systems will have a calculated $k_{\text{eff}} > 0.9667$. Based on this result, the Portsmouth Nuclear Criticality Safety Department has adopted the calculational acceptance criteria that a $k_{\text{eff}} + 2\sigma \leq 0.95$ is safely subcritical.

9.0 REFERENCES

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APPENDIX A

MCNP INPUT FILES

```

FOX1
1 1 -1.108 -1 +2 -3 +4 +5 -6 $CUBOID OF URANYL FLUORIDE
2 0 -1 +2 -3 +4 +6 -7 $CUBOID VOID
3 2 -2.6989 (+1:-2:+3:-4:-5) -8 +9 -10 +11 -7 +12 $CUBOID OF ALUMINUM
4 0 +8:-9:+10:-11:+7:-12 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 px +7.62
2 px -7.62
3 py +60.96
4 py -60.96
5 pz 0.0
6 pz +69.215
7 pz +121.92
8 px +7.9375
9 px -7.9375
10 py +61.2775
11 py -61.2775
12 pz -0.3175

```

```

mode n
imp:n 1 1 1 0
m1 92234.50c 2.52028-6
    92235.50c 2.24845-4
    92238.50c 1.31278-5
    92236.50c 6.48749-7
    8016.50c 3.34432-2
    9019.50c 4.82283-4
    1001.50c 6.59219-2
mt1 lwtr.01t
m2 13027.50c 1
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

FOX2
1 1 -1.108 -1 +2 -3 +4 +5 -6 $CUBOID OF URANYL FLUORIDE
2 0 -1 +2 -3 +4 +6 -7 $CUBOID VOID
3 2 -2.6989 (+1:-2:+3:-4:-5) -8 +9 -10 +11 -7 +12 $CUBOID OF ALUMINUM
4 3 -.9982 (+8:-9:+10:-11:-12) -13 +14 -15 +16 -6 +17 $WATER REFLECTOR
5 0 (+8:-9:+10:-11) -13 +14 -15 +16 +6 -7 $VOID
6 0 +13:-14:+15:-16:+7:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 px +7.62
2 px -7.62
3 py +60.96
4 py -60.96
5 pz 0.0
6 pz +20.5486
7 pz +121.285
8 px +7.9375
9 px -7.9375
10 py +61.2775
11 py -61.2775
12 pz -0.3175
13 px +37.9375
14 px -37.9375
15 py +91.2775
16 py -91.2775
17 pz -30.3175

```

```

mode n
imp:n 1 4r 0
m1 92234.50c 2.52028-6
    92235.50c 2.24845-4
    92238.50c 1.31278-5
    92236.50c 6.48749-7
    8016.50c 3.34432-2
    9019.50c 4.82283-4
    1001.50c 6.59219-2
mt1 lwtr.01t
m2 13027.50c 1
m3 1001.50c 2
    8016.50c 1
mt3 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

FOX3
1 1 -1.108 -1 +2 -3 +4 +5 -6 u=1 $CUBOID OF URANYL FLUORIDE
2 0 -1 +2 -3 +4 +6 -7 u=1 $CUBOID VOID
3 2 -2.6989 (+1:-2:+3:-4:-5) u=1 $CUBOID OF ALUMINUM
4 0 -13 +14 -15 +16 -17 +18 fill=1 trcl=(-15.5575 0 0) $CELL FILLED WITH 1-3
5 0 -13 +14 -15 +16 -17 +18 fill=1 trcl=(+15.5575 0 0) $LIKE 4
6 0 -19 +20 -21 +22 -23 +24 #4 #5 $VOID
7 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

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```

1 px +7.62
2 px -7.62
3 py +60.96
4 py -60.96
5 pz 0.0
6 pz +29.7688
7 pz +121.9201
8 px +7.9376
9 px -7.9376
10 py +61.2776
11 py -61.2776
12 pz -0.3176
13 px +7.9375
14 px -7.9375
15 py +61.2775
16 py -61.2775
17 pz +121.92
18 pz -0.3175
19 px +31.1150
20 px -31.1150
21 py +68.8975
22 py -68.8975
23 pz +129.54
24 pz -7.9375

```

```

mode n
imp:n 1 5r 0
m1 92234.50c 2.52028-6
    92235.50c 2.24845-4
    92238.50c 1.31278-5
    92236.50c 6.48749-7
    8016.50c 3.34432-2
    9019.50c 4.82283-4
    1001.50c 6.59219-2
mt1 lwtr.01t
m2 13027.50c 1
kcode 1000 1.0 10 100
ksrc 15.5575 0 5 -15.5575 0 5
print

```

```

FOX4
1 1 -1.108 -1 +2 -3 +4 +5 -6 u=1 SCUBOID OF URANYL FLUORIDE
2 0 -1 +2 -3 +4 +6 -7 u=1 SCUBOID VOID
3 2 -2.6989 (+1:-2:+3:-4:-5:+7) -8 +9 -10 +11 -7 +12 u=1 SCUBOID OF ALUMINUM
4 0 -13 +14 -15 +16 -17 +18 fill=1 trcl=(-15.5575 0 0) SCCELL FILL WITH 1-3
5 0 -13 +14 -15 +16 -17 +18 fill=1 trcl=(+15.5575 0 0) SLIKE 4
6 3 -0.9982 -19 +20 -21 +22 -6 +23 #4 #5 $WATER REFLECTOR
7 0 -19 +20 -21 +22 +6 -17 #4 #5 $VOID
8 0 +19:-20:+21:-22:+17:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 px +7.62
2 px -7.62
3 py +60.96
4 py -60.96
5 pz 0.0
6 pz +20.066
7 pz +121.2851
8 px +7.9376
9 px -7.9376
10 py +61.2776
11 py -61.2776
12 pz -0.3176
13 px +7.9375
14 px -7.9375
15 py +61.2775
16 py -61.2775
17 pz +121.285
18 pz -0.3175
19 px +53.4950
20 px -53.4950
21 py +91.2775
22 py -91.2775
23 pz -30.3175

```

```

mode n
imp:n 1 6r 0
m1 92234.50c 2.52028-6
    92235.50c 2.24845-4
    92238.50c 1.31278-5
    92236.50c 6.48749-7
    8016.50c 3.34432-2
    9019.50c 4.82283-4
    1001.50c 6.59219-2
mt1 lwtr.01t
m2 13027.50c 1
m3 1001.50c 2
    8016.50c 1
mt3 lwtr.01t

```

kcode 1000 1.0 10 100
ksrc -15.5575 0 10 15.5575 0 10
print

kcode 1000 1.0 10 100
ksrc -15.5575 0 10 15.5575 0 10
print

FOX5
 1 1 -1.02 -1
 2 2 -2.6989 +1 -2
 3 0 +2
 \$SPHERE OF URANYL FLUORIDE
 \$SPHERE OF ALUMINUM
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 34.6
 2 so 34.92

mode n
 imp:n 1 1 0
 m1 92234.50c 5.34992-7
 92235.50c 4.77288-5
 92238.50c 2.78669-6
 92236.50c 1.37713-7
 8016.50c 3.33396-2
 9019.50c 1.02376-4
 1001.50c 6.64745-2
 mt1 lwtr.01t
 m2 13027.50c 1
 kcode 1000 1.0 10 100
 ksrc 0 0 0
 print

FOX6
 1 1 -1.4 -1
 2 2 -2.6989 +1 -2
 3 3 -0.9982 +2 -3
 4 0 +3
 \$SPHERE OF URANYL FLUORIDE
 \$SPHERE OF ALUMINUM
 \$WATER REFLECTOR
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 11.51765
 2 so 11.67765
 3 so 41.67765

mode n
 imp:n 1 1 1 0
 m1 92234.50c 9.32864-6
 92235.50c 8.32245-4
 92238.50c 4.85914-5
 92236.50c 2.40129-6
 8016.50c 3.34713-2
 9019.50c 1.78513-3
 1001.50c 6.33723-2
 mt1 lwtr.01t
 m2 13027.50c 1
 m3 1001.50c 2
 8016.50c 1
 mt3 lwtr.01t
 kcode 1000 1.0 10 100
 ksrc 0 0 0
 print

FOX7
 1 1 -1.24 -1
 2 2 -2.6989 +1 -2
 3 3 -0.9982 +2 -3
 4 0 +3
 \$SPHERE OF URANYL FLUORIDE
 \$SPHERE OF ALUMINUM
 \$WATER REFLECTOR
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 11.84423
 2 so 12.00423
 3 so 42.00423

mode n
 imp:n 1 1 1 0
 m1 92234.50c 5.70743-6
 92235.50c 5.09183-4
 92238.50c 2.97291-5
 92236.50c 1.46916-6
 8016.50c 3.32995-2
 9019.50c 1.09218-3
 1001.50c 6.44146-2
 mt1 lwtr.01t
 m2 13027.50c 1
 m3 1001.50c 2
 8016.50c 1
 mt3 lwtr.01t
 kcode 1000 1.0 10 100
 ksrc 0 0 0
 print

FOX8
 1 1 -1.03 -1
 2 2 -2.6989 +1 -2
 3 3 -0.9982 +2 -3
 4 0 +3
 \$SPHERE OF URANYL FLUORIDE
 \$SPHERE OF ALUMINUM
 \$WATER REFLECTOR
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 27.91322

2 so 28.11322
3 so 58.11322

mode n

imp:n 1 1 1 0

m1 92234.50c 5.89850-7
92235.50c 5.26229-5
92238.50c 3.07244-6
92236.50c 1.51834-7
8016.50c 3.35955-2
9019.50c 1.12874-4
1001.50c 6.69653-2

mt1 lwtr.01t

m2 13027.50c 1
m3 1001.50c 2
8016.50c 1

mt3 lwtr.01t

kcode 1000 1.0 10 100

ksrc 0 0 0

print

FOX9

1 1 -2.0065 -1 +4 -5
2 2 -2.6989 +1 -2 -6 +7
3 2 -2.6989 -1 +5 -6
4 2 -2.6989 -1 -4 +7
5 3 -0.9982 +2 -3 -8 +9
6 3 -0.9982 -2 +6 -8
7 3 -0.9982 -2 -7 +9
8 0 +3:+8:-9

\$CYLINDER OF URANYL FLUORIDE
\$CYLINDER OF ALUMINUM
\$ALUMINUM (TOP)
\$ALUMINUM (BOTTOM)
\$WATER REFLECTOR
\$WATER REFLECTOR (TOP)
\$WATER REFLECTOR (BOTTOM)
\$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 7.62

2 cz 7.7724

3 cz 37.7724

4 pz 0.0

5 pz +89.3

6 pz +89.4524

7 pz -0.1524

8 pz +119.4524

9 pz -30.1524

mode n

imp:n 1 6r 0

m1 92234.50c 2.38022-5
92235.50c 2.12349-3
92238.50c 1.23982-4
92236.50c 6.12695-6
8016.50c 3.30532-2
9019.50c 4.55480-3
1001.50c 5.69969-2

mt1 lwtr.01t

m2 13027.50c 1
m3 1001.50c 2
8016.50c 1

mt3 lwtr.01t

kcode 1000 1.0 10 100

ksrc 0 0 5

print

FOX10

1 1 -1.6534 -1 +4 -5
2 2 -2.6989 +1 -2 -6 +7
3 2 -2.6989 -1 +5 -6
4 2 -2.6989 -1 -4 +7
5 3 -0.9982 +2 -3 -8 +9
6 3 -0.9982 -2 +6 -8
7 3 -0.9982 -2 -7 +9
8 0 +3:+8:-9

\$CYLINDER OF URANYL FLUORIDE
\$CYLINDER OF ALUMINUM
\$ALUMINUM (TOP)
\$ALUMINUM (BOTTOM)
\$WATER REFLECTOR
\$WATER REFLECTOR (TOP)
\$WATER REFLECTOR (BOTTOM)
\$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 8.255

2 cz 8.4074

3 cz 38.4074

4 pz 0.0

5 pz +38.7

6 pz +38.8524

7 pz -0.1524

8 pz +68.8524

9 pz -30.1524

mode n

imp:n 1 6r 0

m1 92234.50c 1.54393-5
92235.50c 1.37741-3
92238.50c 8.04212-5
92236.50c 3.97426-6

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```

      8016.50c    3.32048-2
      9019.50c    2.95448-3
      1001.50c    6.05007-2
mt1  lwtr.01t
m2   13027.50c    1
m3   1001.50c     2
      8016.50c    1
mt3  lwtr.01t
kcode 1000 1.0 10 100
ksrc  0 0 5
print

```

```

FOX11
1  1 -2.0065 -1 +4 -5  $CYLINDER OF URANYL FLUORIDE
2  2 -2.6989 +1 -2 -6 +7 $CYLINDER OF ALUMINUM
3  2 -2.6989 -1 +5 -6  $ALUMINUM (TOP)
4  2 -2.6989 -1 -4 +7  $ALUMINUM (BOTTOM)
5  3 -0.9982 +2 -3 -8 +9 $WATER REFLECTOR
6  3 -0.9982 -2 +6 -8  $WATER REFLECTOR (TOP)
7  3 -0.9982 -2 -7 +9  $WATER REFLECTOR (BOTTOM)
8  0              +3:+8:-9 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 12.7
2  cz 12.8524
3  cz 42.8524
4  pz 0.0
5  pz +12.4
6  pz +12.5524
7  pz -0.1524
8  pz +42.5524
9  pz -30.1524

```

```

mode n
imp:n 1 6r 0
m1  92234.50c    2.38022-5
      92235.50c    2.12349-3
      92238.50c    1.23982-4
      92236.50c    6.12695-6
      8016.50c    3.30532-2
      9019.50c    4.55480-3
      1001.50c    5.69969-2
mt1  lwtr.01t
m2   13027.50c    1
m3   1001.50c     2
      8016.50c    1
mt3  lwtr.01t
kcode 1000 1.0 10 100
ksrc  0 0 5
print

```

```

FOX12
1  1 -2.0065 -1 +4 -5  $CYLINDER OF URANYL FLUORIDE
2  2 -2.6989 +1 -2 -6 +7 $CYLINDER OF ALUMINUM
3  2 -2.6989 -1 +5 -6  $ALUMINUM (TOP)
4  2 -2.6989 -1 -4 +7  $ALUMINUM (BOTTOM)
5  3 -0.9982 +2 -3 -8 +9 $WATER REFLECTOR
6  3 -0.9982 -2 +6 -8  $WATER REFLECTOR (TOP)
7  3 -0.9982 -2 -7 +9  $WATER REFLECTOR (BOTTOM)
8  0              +3:+8:-9 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 19.05
2  cz 19.2024
3  cz 49.2024
4  pz 0.0
5  pz +7.7
6  pz +7.8524
7  pz -0.1524
8  pz +37.8524
9  pz -30.1524

```

```

mode n
imp:n 1 6r 0
m1  92234.50c    2.38022-5
      92235.50c    2.12349-3
      92238.50c    1.23982-4
      92236.50c    6.12695-6
      8016.50c    3.30532-2
      9019.50c    4.55480-3
      1001.50c    5.69969-2
mt1  lwtr.01t
m2   13027.50c    1
m3   1001.50c     2
      8016.50c    1
mt3  lwtr.01t
kcode 1000 1.0 10 100
ksrc  0 0 5
print

```

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GW11
 1 1 +.10020245 -1
 2 2 -2.6989 +1 -2
 3 0 +2
 \$SPHERE OF URANYL NITRATE
 \$SPHERE OF ALUMINUM
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 34.5948
 2 so 34.9148

mode n
 imp:n 1 1 0
 m1 92234.50c 0.00538-4
 92235.50c 0.48066-4
 92238.50c 0.02807-4
 92236.50c 0.00138-4
 8016.50c 337.36-4
 7014.50c 1.8690-4
 1001.50c 662.28-4
 mt1 lwtr.01t
 m2 13027.50c 1
 kcode 1000 1.0 10 100
 ksrc 0 0 0
 print

GW12
 1 1 +.10022139 -1
 2 2 -2.6989 +1 -2
 3 0 +2
 \$SPHERE OF URANYL NITRATE
 \$SPHERE OF ALUMINUM
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 34.5948
 2 so 34.9148

mode n
 imp:n 1 1 0
 m1 92234.50c .00631-4
 92235.50c .56206-4
 92238.50c .03281-4
 92236.50c .00163-4
 8016.50c 337.95-4
 7014.50c 2.1290-4
 1001.50c 661.48-4
 5010.50c .01118-4
 5011.50c .04090-4
 mt1 lwtr.01t
 m2 13027.50c 1
 kcode 1000 1.0 10 100
 ksrc 0 0 0
 print

GW13
 1 1 +.10024219 -1
 2 2 -2.6989 +1 -2
 3 0 +2
 \$SPHERE OF URANYL NITRATE
 \$SPHERE OF ALUMINUM
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 34.5948
 2 so 34.9148

mode n
 imp:n 1 1 0
 m1 92234.50c .00716-4
 92235.50c .63944-4
 92238.50c .03734-4
 92236.50c .00184-4
 8016.50c 338.54-4
 7014.50c 2.3920-4
 1001.50c 660.70-4
 5010.50c .02235-4
 5011.50c .08180-4
 mt1 lwtr.01t
 m2 13027.50c 1
 kcode 1000 1.0 10 100
 ksrc 0 0 0
 print

GW14
 1 1 +.1002575 -1
 2 2 -2.6989 +1 -2
 3 0 +2
 \$SPHERE OF URANYL NITRATE
 \$SPHERE OF ALUMINUM
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 so 34.5948
 2 so 34.9148

mode n
 imp:n 1 1 0
 m1 92234.50c .00762-4
 92235.50c .67959-4

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92238.50c	.03967-4
92236.50c	.00197-4
8016.50c	338.89-4
7014.50c	2.5480-4
1001.50c	660.28-4
5010.50c	.02751-4
5011.50c	.10067-4

mt1 lwtr,0lt
m2 13027.50c 1
kcode 1000 1.0 10 100
ksrc 0 0 0
print

```

GW15
1 1 +.10014055 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.8212 +1 -2 +3 -7 $CYLINDER OF CARBON STEEL
4 2 -7.8212 -1 +6 -7 $CARBON STEEL (TOP)
5 2 -7.8212 -1 +3 -4 $CARBON STEEL (BOTTOM)
6 0 +2:-3:+7 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 77.3684
2 cz 77.4984
3 pz -0.13
4 pz 0.0
5 pz +46.5074
6 pz +264.0
7 pz +264.13

```

```

mode n
imp:n 1 4r 0
m1 92234.50c .00469-4
    92235.50c .41364-4
    92238.50c .02271-4
    92236.50c .00243-4
    8016.50c 336.24-4
    7014.50c 1.2720-4
    1001.50c 663.45-4
mt1 lwtr.01t
m2 6012.50c 3.92503-3
    26000.50c 8.34982-2
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

GW16
1 1 +.10018251 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.8212 +1 -2 +3 -7 $CYLINDER OF CARBON STEEL
4 2 -7.8212 -1 +6 -7 $CARBON STEEL (TOP)
5 2 -7.8212 -1 +3 -4 $CARBON STEEL (BOTTOM)
6 0 +2:-3:+7 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 77.3684
2 cz 77.4984
3 pz -0.13
4 pz 0.0
5 pz +48.7684
6 pz +264.0
7 pz +264.13

```

```

mode n
imp:n 1 4r 0
m1 92234.50c .00451-4
    92235.50c .40595-4
    92238.50c .02339-4
    92236.50c .00222-4
    8016.50c 336.55-4
    7014.50c 1.4090-4
    1001.50c 663.43-4
mt1 lwtr.01t
m2 6012.50c 3.92503-3
    26000.50c 8.34982-2
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

GW17
1 1 +.10014562 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.8212 +1 -2 +3 -7 $CYLINDER OF CARBON STEEL
4 2 -7.8212 -1 +6 -7 $CARBON STEEL (TOP)
5 2 -7.8212 -1 +3 -4 $CARBON STEEL (BOTTOM)
6 0 +2:-3:+7 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 77.3684
2 cz 77.4984
3 pz -0.13
4 pz 0.0
5 pz +74.2442
6 pz +264.0
7 pz +264.13

```

```

mode n
imp:n 1 4r 0
m1 92234.50c .00409-4
    92235.50c .36452-4
    92238.50c .02048-4
    92236.50c .00209-4
    8016.50c 336.05-4

```

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```

7014.50c 1.1850-4
1001.50c 663.83-4
mt1 lwtr.01t
m2 6012.50c 3.92503-3
26000.50c 8.34982-2
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

GM18

```

1 1 +.1001562 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.8212 +1 -2 +3 -7 $CYLINDER OF CARBON STEEL
4 2 -7.8212 -1 +6 -7 $CARBON STEEL (TOP)
5 2 -7.8212 -1 +3 -4 $CARBON STEEL (BOTTOM)
6 0 +2:-3:+7 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 77.3684
2 cz 77.4984
3 pz -0.13
4 pz 0.0
5 pz +106.8324
6 pz +264.0
7 pz +264.13

```

mode n

```

imp:n 1 4r 0
m1 92234.50c .00397-4
92235.50c .34845-4
92238.50c .01962-4
92236.50c .00194-4
8016.50c 336.09-4
7014.50c 1.2080-4
1001.50c 663.89-4
mt1 lwtr.01t
m2 6012.50c 3.92503-3
26000.50c 8.34982-2
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

GM19

```

1 1 +.10016641 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.8212 +1 -2 +3 -7 $CYLINDER OF CARBON STEEL
4 2 -7.8212 -1 +6 -7 $CARBON STEEL (TOP)
5 2 -7.8212 -1 +3 -4 $CARBON STEEL (BOTTOM)
6 0 +2:-3:+7 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 77.3684
2 cz 77.4984
3 pz -0.13
4 pz 0.0
5 pz +204.9272
6 pz +264.0
7 pz +264.13

```

mode n

```

imp:n 1 4r 0
m1 92234.50c .00384-4
92235.50c .33519-4
92238.50c .01924-4
92236.50c .00186-4
8016.50c 336.15-4
7014.50c 1.2440-4
1001.50c 663.91-4
mt1 lwtr.01t
m2 6012.50c 3.92503-3
26000.50c 8.34982-2
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

MAG1

```

1 1 -2.144 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (BOTTOM)
6 0 (+2:+6) -8 +9 -10 +11 -12 +7 u=1 $VOID
7 3 -1.1800 +8:-9:+10:-11:+12:-7 u=1 $PLEXIGLASS
8 0 -13 +14 -15 +16 -17 +18 u=2 fill=1 lat=1 $CELL FILLED WITH 1-7
9 0 -19 +20 -21 +22 -23 +24 fill=2 $7X7X4 ARRAY
10 4 -0.9200 (+19:-20:+21:-22) -25 +26 -27 +28 -23 +24 $POLYETHYLENE REFLECTOR (SIDES)
11 4 -0.9200 -25 +26 -27 +28 +23 -29 $POLYETHYLENE REFLECTOR (TOP)
12 4 -0.9200 -25 +26 -27 +28 -24 +30 $POLYETHYLENE REFLECTOR (BOTTOM)

```

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13 0 +25:-26:+27:-28:+29:-30

\$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 3.735
 2 cz 3.79
 3 pz +4.535
 4 pz 0.055
 5 pz +11.645
 6 pz +11.70
 7 pz -0.0001
 8 px +4.025
 9 px -4.025
 10 py +4.025
 11 py -4.025
 12 pz +11.71
 13 px +5.195
 14 px -5.195
 15 py +5.195
 16 py -5.195
 17 pz +14.05
 18 pz -0.0
 19 px +35.194999
 20 px -35.194999
 21 py +35.194999
 22 py -35.194999
 23 pz +53.859999
 24 pz +0.0001
 25 px +50.195
 26 px -50.195
 27 py +50.195
 28 py -50.195
 29 pz +68.86
 30 pz -15.0

mode n

imp:n 1 11r 0

m1 92234.50c 4.80769-5
 92235.50c 4.50426-3
 92236.50c 1.63709-5
 92238.50c 2.63548-4
 8016.50c 9.66452-3
 m2 24000.50c 1.74286-2
 25055.51c 1.73633-3
 26000.50c 5.93579-2
 28000.50c 7.72074-3
 m3 8016.50c 1.42047-2
 1001.50c 5.68187-2
 6012.50c 3.55117-2
 m4 1001.50c 7.90600-2
 6012.50c 3.95300-2

mt4 poly.01t

kcode 1000 1.0 10 100

ksrc -31 -31 2 -21 -31 2 -10 -31 2 0 -31 2 10 -31 2 21 -31 2 31 -31 2
 -31 -21 2 -21 -21 2 -10 -21 2 0 -21 2 10 -21 2 21 -21 2 31 -21 2
 -31 -10 2 -21 -10 2 -10 -10 2 0 -10 2 10 -10 2 21 -10 2 31 -10 2
 -31 0 0 -21 0 0 -10 0 0 0 0 10 0 0 21 0 0 31 0 2
 -31 10 0 -21 10 0 -10 10 0 0 10 0 10 10 0 21 10 0 31 10 2
 -31 21 0 -21 21 0 -10 21 0 0 21 0 10 21 0 21 21 0 31 21 2
 -31 31 0 -21 31 0 -10 31 0 0 31 0 10 31 0 21 31 0 31 31 2
 -31 -31 16 -21 -31 16 -10 -31 16 0 -31 16 10 -31 16 21 -31 16 31 -31 16
 -31 -21 16 -21 -21 16 -10 -21 16 0 -21 16 10 -21 16 21 -21 16 31 -21 16
 -31 -10 16 -21 -10 16 -10 -10 16 0 -10 16 10 -10 16 21 -10 16 31 -10 16
 -31 0 16 -21 0 16 -10 0 16 0 0 16 10 0 16 21 0 16 31 0 16
 -31 10 16 -21 10 16 -10 10 16 0 10 16 10 10 16 21 10 16 31 10 16
 -31 21 16 -21 21 16 -10 21 16 0 21 16 10 21 16 21 21 16 31 21 16
 -31 31 16 -21 31 16 -10 31 16 0 31 16 10 31 16 21 31 16 31 31 16
 -31 -31 30 -21 -31 30 -10 -31 30 0 -31 30 10 -31 30 21 -31 30 31 -31 30
 -31 -21 30 -21 -21 30 -10 -21 30 0 -21 30 10 -21 30 21 -21 30 31 -21 30
 -31 -10 30 -21 -10 30 -10 -10 30 0 -10 30 10 -10 30 21 -10 30 31 -10 30
 -31 0 30 -21 0 30 -10 0 30 0 0 30 10 0 30 21 0 30 31 0 30
 -31 10 30 -21 10 30 -10 10 30 0 10 30 10 10 30 21 10 30 31 10 30
 -31 21 30 -21 21 30 -10 21 30 0 21 30 10 21 30 21 21 30 31 21 30
 -31 31 30 -21 31 30 -10 31 30 0 31 30 10 31 30 21 31 30 31 31 30
 -31 -31 44 -21 -31 44 -10 -31 44 0 -31 44 10 -31 44 21 -31 44 31 -31 44
 -31 -21 44 -21 -21 44 -10 -21 44 0 -21 44 10 -21 44 21 -21 44 31 -21 44
 -31 -10 44 -21 -10 44 -10 -10 44 0 -10 44 10 -10 44 21 -10 44 31 -10 44
 -31 0 44 -21 0 44 -10 0 44 0 0 44 10 0 44 21 0 44 31 0 44
 -31 10 44 -21 10 44 -10 10 44 0 10 44 10 10 44 21 10 44 31 10 44
 -31 21 44 -21 21 44 -10 21 44 0 21 44 10 21 44 21 21 44 31 21 44
 -31 31 44 -21 31 44 -10 31 44 0 31 44 10 31 44 21 31 44 31 31 44

print

MAG2

1 1 -5.505 -1 -3 +4 u=1
 2 0 -1 +3 -5 u=1
 3 2 -7.9200 +1 -2 -6 +7 u=1
 4 2 -7.9200 -1 -4 +7 u=1
 5 2 -7.9200 -1 +5 -6 u=1
 6 0 +2:+6:-7 u=1

\$CYLINDER OF U02
 \$CYLINDER VOID
 \$STAINLESS STEEL CONTAINER
 \$STAINLESS STEEL (TOP)
 \$STAINLESS STEEL (BOTTOM)
 \$VOID

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```

7 0 -8 +9 -10 +11 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $4X4X1 ARRAY
9 3 -0.9200 #8 -18 +19 -20 +21 -22 +23 $POLYETHYLENE REFLECTOR
10 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +7.85
9 px -7.85
10 py +7.85
11 py -7.85
12 px +54.949999
13 px -7.849999
14 py +54.949999
15 py -7.849999
16 pz +11.15
17 pz -11.15
18 px +69.95
19 px -22.85
20 py +69.95
21 py -22.85
22 pz +26.15
23 pz -26.15

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4
    8016.50c 2.48150-2
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
kcode 1000 1.0 10 100
ksrct 0 0 0 15 0 0 31 0 0 46 0 0
      0 15 0 15 15 0 31 15 0 46 15 0
      0 31 0 15 31 0 31 31 0 46 31 0
      0 46 0 15 46 0 31 46 0 46 46 0
print

```

```

MAG3
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $STAINLESS STEEL CONTAINER
4 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (BOTTOM)
6 0 +2:+6:-7 u=1 $VOID
7 0 -8 +9 -10 +11 -24 +25 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $3X2X2 ARRAY
9 3 -0.9200 #8 -18 +19 -20 +21 -22 +23 $POLYETHYLENE REFLECTOR
10 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +7.85
9 px -7.85
10 py +7.85
11 py -7.85
12 px +22.549999
13 px -22.549999
14 py +22.549999
15 py -7.849999
16 pz +33.449999
17 pz -11.149999
18 px +37.55
19 px -37.55
20 py +37.55
21 py -22.85
22 pz +48.45
23 pz -26.15
24 pz +11.15
25 pz -11.15

```



```

mode n
imp:n 1 8r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4
    8016.50c 2.48150-2
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
kcode 1000 1.0 10 100
ksrc -16 0 0 0 0 0 16 0 0
      -16 16 0 0 16 0 16 16 0
      -16 0 22 0 0 22 16 0 22
      -16 16 22 0 16 22 16 16 22
print

```

```

MAG4
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $STAINLESS STEEL CONTAINER
4 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (BOTTOM)
6 0 +2:+6:-7 u=1 $VOID
7 0 -8 +9 -10 +11 -24 +25 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $3X3X2 ARRAY
9 3 -0.9200 #8 -18 +19 -20 +21 -22 +23 $POLYETHYLENE REFLECTOR
10 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +9.08
9 px -9.08
10 py +9.08
11 py -9.08
12 px +27.239999
13 px -27.239999
14 py +27.239999
15 py -27.239999
16 pz +33.449999
17 pz -11.149999
18 px +42.24
19 px -42.24
20 py +42.24
21 py -42.24
22 pz +48.45
23 pz -26.15
24 pz +11.15
25 pz -11.15

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4
    8016.50c 2.48150-2
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
kcode 1000 1.0 10 100
ksrc -18 -18 0 0 -18 0 18 -18 0
      -18 0 0 0 0 0 18 0 0
      -18 18 0 0 18 0 18 18 0
      -18 -18 22 0 -18 22 18 -18 22
      -18 0 22 0 0 22 18 0 22
      -18 18 22 0 18 22 18 18 22
print

```

```

MAG5
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4
    8016.50c 2.48150-2
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
kcode 1000 1.0 10 100
ksrc -16 0 0 0 0 0 16 0 0
      -16 16 0 0 16 0 16 16 0
      -16 0 22 0 0 22 16 0 22
      -16 16 22 0 16 22 16 16 22
print

```

```

MAG4
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $STAINLESS STEEL CONTAINER
4 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (BOTTOM)
6 0 +2:+6:-7 u=1 $VOID
7 0 -8 +9 -10 +11 -24 +25 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $3X3X2 ARRAY
9 3 -0.9200 #8 -18 +19 -20 +21 -22 +23 $POLYETHYLENE REFLECTOR
10 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +9.08
9 px -9.08
10 py +9.08
11 py -9.08
12 px +27.239999
13 px -27.239999
14 py +27.239999
15 py -27.239999
16 pz +33.449999
17 pz -11.149999
18 px +42.24
19 px -42.24
20 py +42.24
21 py -42.24
22 pz +48.45
23 pz -26.15
24 pz +11.15
25 pz -11.15

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4
    8016.50c 2.48150-2
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
kcode 1000 1.0 10 100
ksrc -18 -18 0 0 -18 0 18 -18 0
      -18 0 0 0 0 0 18 0 0
      -18 18 0 0 18 0 18 18 0
      -18 -18 22 0 -18 22 18 -18 22
      -18 0 22 0 0 22 18 0 22
      -18 18 22 0 18 22 18 18 22
print

```

```

MAG5
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)

```

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```

5 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (BOTTOM)
6 0 (+2:+6:-7) u=1 $VOID
7 0 -8 +9 -10 +11 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $3X3X1 ARRAY
9 0 -12 +13 -14 +15 -16 +17 fill=2 trcl=(0 0 24.66) $3X3X1 ARRAY TRCL=(0 0 24.66)
10 3 -1.1800 #8 #9 -12 +13 -14 +15 +17 -18 $PLEXIGLASS BETWEEN ARRAYS
11 4 -0.9200 (+12:-13:+14:-15) -19 +20 -21 +22 +17 -18 $POLYETHYLENE REFLECTOR (SIDES)
12 4 -0.9200 -19 +20 -21 +22 +18 -23 $POLYETHYLENE REFLECTOR (TOP)
13 4 -0.9200 -19 +20 -21 +22 -17 +24 $POLYETHYLENE REFLECTOR (BOTTOM)
14 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +10.22
9 px -10.22
10 py +10.22
11 py -10.22
12 px +30.659999
13 px -30.659999
14 py +30.659999
15 py -30.659999
16 pz +11.15
17 pz -11.15
18 pz +35.81
19 px +45.66
20 px -45.66
21 py +45.66
22 py -45.66
23 pz +50.81
24 pz -26.15

```

```

mode n
imp:n 1 12r 0
m1 92234.50c 1.23444-4
92235.50c 1.15653-2
92236.50c 4.20346-5
92238.50c 6.76695-4
8016.50c 2.48150-2
m2 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 1001.50c 7.90600-2
6012.50c 3.95300-2
mt4 poly.01t
kcode 1000 1.0 10 100
ksrc -20 -20 0 0 -20 0 20 -20 0
-20 0 0 0 0 20 0 0
-20 20 0 0 20 0 20 20 0
-20 -20 25 0 -20 25 20 -20 25
-20 0 25 0 0 25 20 0 25
-20 20 25 0 20 25 20 20 25
print

```

```

MAG6
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (BOTTOM)
6 0 (+2:+6:-7) u=1 $VOID
7 0 -8 +9 -10 +11 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $3X3X1 ARRAY
9 0 -12 +13 -14 +15 -16 +17 fill=2 trcl=(0 0 25.92) $3X3X1 ARRAY TRCL=(0 0 25.92)
10 3 -1.1800 #8 #9 -12 +13 -14 +15 +17 -18 $PLEXIGLASS BETWEEN ARRAYS
11 4 -0.9200 (+12:-13:+14:-15) -19 +20 -21 +22 +17 -18 $POLYETHYLENE REFLECTOR (SIDES)
12 4 -0.9200 -19 +20 -21 +22 +18 -23 $POLYETHYLENE REFLECTOR (TOP)
13 4 -0.9200 -19 +20 -21 +22 -17 +24 $POLYETHYLENE REFLECTOR (BOTTOM)
14 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +10.22
9 px -10.22
10 py +10.22

```

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```

11 py -10.22
12 px +30.659999
13 px -30.659999
14 py +30.659999
15 py -30.659999
16 pz +11.15
17 pz -11.15
18 pz +37.07
19 px +45.66
20 px -45.66
21 py +45.66
22 py -45.66
23 pz +52.07
24 pz -26.15

```

```

mode n
imp:n 1 12r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4
    8016.50c 2.48150-2
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt4 poly.01t
kcode 1000 1.0 10 100
ksrc -20 -20 0 0 -20 0 20 -20 0
      -20 0 0 0 0 20 0 0
      -20 20 0 0 20 0 20 20 0
      -20 -20 26 0 -20 26 20 -20 26
      -20 0 26 0 0 26 20 0 26
      -20 20 26 0 20 26 20 20 26
print

```

```

MAG7
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (BOTTOM)
6 0 (+2:+6:-7) u=1 $VOID
7 0 -8 +9 -10 +11 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -8 +9 -10 +11 u=3 lat=1 fill=-1:1 -1:1 0:0
    3 1 1 1 1 1 1 1
9 0 -12 +13 -14 +15 -16 +17 fill=2 $LIKE 7 (CORNER UNIT REMOVED FROM ARRAY)
10 0 -12 +13 -14 +15 -16 +17 fill=3 trcl=(0 0 25.92) $3X3X1 ARRAY
11 3 -1.1800 #9 #10 -12 +13 -14 +15 +17 -18 $3X3X1 ARRAY TRCL=(0 0 25.92) UNIT REMOVED
12 4 -0.9200 (+12:-13:+14:-15) -19 +20 -21 +22 +17 -18 $PLEXIGLASS BETWEEN ARRAYS
13 4 -0.9200 -19 +20 -21 +22 +18 -23 $POLYETHYLENE REFLECTOR (SIDES)
14 4 -0.9200 -19 +20 -21 +22 -17 +24 $POLYETHYLENE REFLECTOR (TOP)
15 0 +19:-20:+21:-22:+23:-24 $POLYETHYLENE REFLECTOR (BOTTOM)
    $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +10.22
9 px -10.22
10 py +10.22
11 py -10.22
12 px +30.659999
13 px -30.659999
14 py +30.659999
15 py -30.659999
16 pz +11.15
17 pz -11.15
18 pz +37.07
19 px +45.66
20 px -45.66
21 py +45.66
22 py -45.66
23 pz +52.07
24 pz -26.15

```

```

mode n
imp:n 1 13r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4

```

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```

m2 8016.50c 2.48150-2
24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 1001.50c 7.90600-2
6012.50c 3.95300-2
mt4 poly.01t
kcode 1000 1.0 10 100
ksrc -20 -20 0 0 -20 0 20 -20 0
-20 0 0 0 0 0 20 0 0
-20 20 0 0 20 0 20 20 0
0 -20 26 20 -20 26
-20 0 26 0 0 26 20 0 26
-20 20 26 0 20 26 20 20 26
print

```

```

MAG8
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (BOTTOM)
6 0 (+2:+6:-7) u=1 $VOID
7 0 -8 +9 -10 +11 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $3X3X1 ARRAY
9 0 -12 +13 -14 +15 -16 +17 fill=2 trcl=(0 0 27.12) $3X3X1 ARRAY TRCL=(0 0 27.12)
10 3 -1.1800 #8 #9 -12 +13 -14 +15 +17 -18 $PLEXIGLASS BETWEEN ARRAYS
11 4 -0.9200 (+12:-13:+14:-15) -19 +20 -21 +22 +17 -18 $POLYETHYLENE REFLECTOR (SIDES)
12 4 -0.9200 -19 +20 -21 +22 +18 -23 $POLYETHYLENE REFLECTOR (TOP)
13 4 -0.9200 -19 +20 -21 +22 -17 +24 $POLYETHYLENE REFLECTOR (BOTTOM)
14 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +10.22
9 px -10.22
10 py +10.22
11 py -10.22
12 px +30.659999
13 px -30.659999
14 py +30.659999
15 py -30.659999
16 pz +11.15
17 pz -11.15
18 pz +38.27
19 px +45.66
20 px -45.66
21 py +45.66
22 py -45.66
23 pz +53.27
24 pz -26.15

```

```

mode n
imp:n 1 12r 0
m1 92234.50c 1.23444-4
92235.50c 1.15653-2
92236.50c 4.20346-5
92238.50c 6.76695-4
8016.50c 2.48150-2
m2 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 1001.50c 7.90600-2
6012.50c 3.95300-2
mt4 poly.01t
kcode 1000 1.0 10 100
ksrc -20 -20 0 0 -20 0 20 -20 0
-20 0 0 0 0 0 20 0 0
-20 20 0 0 20 0 20 20 0
-20 -20 27 0 -20 27 20 -20 27
-20 0 27 0 0 27 20 0 27
-20 20 27 0 20 27 20 20 27
print

```

MAG9

```

1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF UO2
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (BOTTOM)
6 0 (+2:+6:-7) u=1 $VOID
7 0 -8 +9 -10 +11 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -8 +9 -10 +11 u=3 lat=1 fill=-1:1 -1:1 0:0 $3X3X1 ARRAY
9 0 3 1 1 1 1 1 1 $3X3X1 ARRAY TRCL=(0 0 27.12) UNIT REMOVED
10 0 -12 +13 -14 +15 -16 +17 fill=2 $PLEXIGLASS BETWEEN ARRAYS
11 3 -1.1800 #9 #10 -12 +13 -14 +15 +17 -18 $POLYETHYLENE REFLECTOR (SIDES)
12 4 -0.9200 (+12:-13:+14:-15) -19 +20 -21 +22 +17 -18 $POLYETHYLENE REFLECTOR (TOP)
13 4 -0.9200 -19 +20 -21 +22 +18 -23 $POLYETHYLENE REFLECTOR (BOTTOM)
14 4 -0.9200 -19 +20 -21 +22 -17 +24 $ZERO IMPORTANCE OUTSIDE WORLD
15 0 +19:-20:+21:-22:+23:-24

```

```

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91
8 px +10.22
9 px -10.22
10 py +10.22
11 py -10.22
12 px +30.659999
13 px -30.659999
14 py +30.659999
15 py -30.659999
16 pz +11.15
17 pz -11.15
18 pz +38.27
19 px +45.66
20 px -45.66
21 py +45.66
22 py -45.66
23 pz +53.27
24 pz -26.15

```

```

mode n
imp:n 1 13r 0
m1 92234.50c 1.23444-4
92235.50c 1.15653-2
92236.50c 4.20346-5
92238.50c 6.76695-4
8016.50c 2.48150-2
m2 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 1001.50c 7.90600-2
6012.50c 3.95300-2
mt4 poly.01t
kcode 1000 1.0 10 100
ksrc -20 -20 0 0 -20 0 20 -20 0
-20 0 0 0 0 0 20 0 0
-20 20 0 0 20 0 20 20 0
0 -20 27 20 -20 27
-20 0 27 0 0 27 20 0 27
-20 20 27 0 20 27 20 20 27
print

```

```

MAG10
1 1 -5.505 -1 -3 +4 u=1 $CYLINDER OF URANIUM DIOXIDE
2 0 -1 +3 -5 u=1 $CYLINDER VOID
3 2 -7.9200 +1 -2 -6 +7 u=1 $CYLINDER OF STAINLESS STEEL
4 2 -7.9200 -1 +5 -6 u=1 $STAINLESS STEEL (TOP)
5 2 -7.9200 -1 -4 +7 u=1 $STAINLESS STEEL (BOTTOM)
6 0 (+2:+6:-7) u=1 $VOID
7 0 -8 +9 -10 +11 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -12 +13 -14 +15 -16 +17 fill=2 $3X3X1 ARRAY
9 0 -12 +13 -14 +15 -16 +17 fill=2 trcl=(0 0 28.38) $3X3X1 ARRAY TRCL=(0 0 28.38)
10 3 -1.1800 #8 #9 -12 +13 -14 +15 +17 -18 $PLEXIGLASS BETWEEN ARRAYS
11 4 -0.9200 (+12:-13:+14:-15) -19 +20 -21 +22 +17 -18 $POLYETHYLENE REFLECTOR (SIDES)
12 4 -0.9200 -19 +20 -21 +22 +18 -23 $POLYETHYLENE REFLECTOR (TOP)
13 4 -0.9200 -19 +20 -21 +22 -17 +24 $POLYETHYLENE REFLECTOR (BOTTOM)
14 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

1 cz 7.65
2 cz 7.68
3 pz +8.88
4 pz -10.88
5 pz +10.88
6 pz +10.91
7 pz -10.91

```

```

8 px +10.22
9 px -10.22
10 py +10.22
11 py -10.22
12 px +30.659999
13 px -30.659999
14 py +30.659999
15 py -30.659999
16 pz +11.15
17 pz -11.15
18 pz +39.53
19 px +45.66
20 px -45.66
21 py +45.66
22 py -45.66
23 pz +54.53
24 pz -26.15

```

```

mode n
imp:n 1 12r 0
m1 92234.50c 1.23444-4
    92235.50c 1.15653-2
    92236.50c 4.20346-5
    92238.50c 6.76695-4
m2 8016.50c 2.48150-2
    24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt4 poly.01t
kcode 1000 1.0 10 100
ksrc -20 -20 0 0 -20 0 20 -20 0
      -20 0 0 0 0 0 20 0 0
      -20 20 0 0 20 0 20 20 0
      -20 -20 28 0 -20 28 20 -20 28
      -20 0 28 0 0 28 20 0 28
      -20 20 28 0 20 28 20 20 28
print

```

```

MAG11
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2+7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$2X2X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +6.985
10 px -6.985
11 py +6.985
12 py -6.985
13 px +20.954999
14 px -6.984999
15 py +20.954999
16 py -6.984999
17 pz +12.78
18 pz -12.78
19 px +35.955
20 px -21.985
21 py +35.955
22 py -21.985
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4

```

```

      8016.50c 3.37790-2
      6012.50c 6.89125-3
      1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
   25055.51c 1.73633-3
   26000.50c 5.93579-2
   28000.50c 7.72074-3
m3 1001.50c 7.90600-2
   6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
   6012.50c 1.99282-2
   1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 0 14 0 0
     0 14 0 14 14 0
print

```

```

MAG12
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2:+7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$2X2X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +7.025
10 px -7.025
11 py +7.025
12 py -7.025
13 px +21.074999
14 px -7.024999
15 py +21.074999
16 py -7.024999
17 pz +12.78
18 pz -12.78
19 px +36.075
20 px -22.025
21 py +36.075
22 py -22.025
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
   92235.50c 1.39213-2
   92236.50c 3.86922-5
   92238.50c 8.26350-4
   8016.50c 3.37790-2
   6012.50c 6.89125-3
   1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
   25055.51c 1.73633-3
   26000.50c 5.93579-2
   28000.50c 7.72074-3
m3 1001.50c 7.90600-2
   6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
   6012.50c 1.99282-2
   1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 0 14 0 0
     0 14 0 14 14 0
print

```

```

MAG13
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE

```



```

3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2:+7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$2X2X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +7.064
10 px -7.064
11 py +7.064
12 py -7.064
13 px +21.191999
14 px -7.063999
15 py +21.191999
16 py -7.063999
17 pz +12.78
18 pz -12.78
19 px +36.192
20 px -22.064
21 py +36.192
22 py -22.064
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4
    8016.50c 3.37790-2
    6012.50c 6.89125-3
    1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
    6012.50c 1.99282-2
    1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 0 14 0 0
    0 14 0 14 14 0
print

```

```

MAG14
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2:+7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$2X3X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +7.620
10 px -7.620
11 py +7.620
12 py -7.620
13 px +22.859999
14 px -7.619999

```

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```

15 py +22.859999
16 py -22.859999
17 pz +12.78
18 pz -12.78
19 px +37.860
20 px -22.620
21 py +37.860
22 py -37.860
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4
    8016.50c 3.37790-2
    6012.50c 6.89125-3
    1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
    6012.50c 1.99282-2
    1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 -15 0 15 -15 0
      0 0 0 15 0 0
      0 15 0 15 15 0
print

```

MAG15

```

1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2:+7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$2X3X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +7.938
10 px -7.938
11 py +7.938
12 py -7.938
13 px +23.813999
14 px -7.937999
15 py +23.813999
16 py -23.813999
17 pz +12.78
18 pz -12.78
19 px +38.814
20 px -22.938
21 py +38.814
22 py -38.814
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4
    8016.50c 3.37790-2
    6012.50c 6.89125-3
    1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3

```

```

26000.50c 5.93579-2
28000.50c 7.72074-3
m3 1001.50c 7.90600-2
6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
6012.50c 1.99282-2
1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 -16 0 16 -16 0
0 0 0 16 0 0
0 16 0 16 16 0
print

```

```

MAG16
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2:+7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$2X3X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +8.017
10 px -8.017
11 py +8.017
12 py -8.017
13 px +24.050999
14 px -8.016999
15 py +24.050999
16 py -24.050999
17 pz +12.78
18 pz -12.78
19 px +39.051
20 px -23.017
21 py +39.051
22 py -39.051
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
92235.50c 1.39213-2
92236.50c 3.86922-5
92238.50c 8.26350-4
8016.50c 3.37790-2
6012.50c 6.89125-3
1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m3 1001.50c 7.90600-2
6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
6012.50c 1.99282-2
1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 -16 0 16 -16 0
0 0 0 16 0 0
0 16 0 16 16 0
print

```

```

MAG17
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)

```

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```

7 0 +2:+7:-8 u=1 $VOID
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-7
9 0 -13 +14 -15 +16 -17 +18 fill=2 $2X4X1 ARRAY
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24 $POLYETHYLENE REFLECTOR
11 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +8.493
10 px -8.493
11 py +8.493
12 py -8.493
13 px +25.478999
14 px -8.492999
15 py +59.450999
16 py -8.492999
17 pz +12.78
18 pz -12.78
19 px +40.479
20 px -23.493
21 py +74.451
22 py -23.493
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4
    8016.50c 3.37790-2
    6012.50c 6.89125-3
    1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
    6012.50c 1.99282-2
    1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 0 17 0 0
      0 17 0 17 17 0
      0 34 0 17 34 0
      0 51 0 17 51 0

```

print

```

MAG18
1 1 -6.9037 -1 -3 +4 u=1 $CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
2 4 -0.8019 -1 +3 -5 u=1 $ALCOHOL LAYER ABOVE OXIDE
3 0 -1 +5 -6 u=1 $VOID
4 2 -7.9200 +1 -2 -7 +8 u=1 $STAINLESS STEEL CONTAINER
5 2 -7.9200 -1 +6 -7 u=1 $STAINLESS STEEL (TOP)
6 2 -7.9200 -1 -4 +8 u=1 $STAINLESS STEEL (BOTTOM)
7 0 +2:+7:-8 u=1 $VOID
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-7
9 0 -13 +14 -15 +16 -17 +18 fill=2 $3X3X1 ARRAY
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24 $POLYETHYLENE REFLECTOR
11 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +8.41
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +9.049
10 px -9.049
11 py +9.049
12 py -9.049
13 px +27.146999
14 px -27.146999
15 py +27.146999
16 py -27.146999

```

```

17 pz +12.78
18 pz -12.78
19 px +42.147
20 px -42.147
21 py +42.147
22 py -42.147
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4
    8016.50c 3.37790-2
    6012.50c 6.89125-3
    1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
    6012.50c 1.99282-2
    1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc -18 -18 0 0 -18 0 18 -18 0
      -18 0 0 0 0 18 0 0
      -18 18 0 0 18 0 18 18 0
print

```

```

MAG19
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2:-7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$3X3X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +5.80
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +8.573
10 px -8.573
11 py +8.573
12 py -8.573
13 px +26.258999
14 px -26.258999
15 py +26.258999
16 py -26.258999
17 pz +12.78
18 pz -12.78
19 px +41.259
20 px -41.259
21 py +41.259
22 py -41.259
23 pz +27.78
24 pz -27.78

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4
    8016.50c 3.37790-2
    6012.50c 6.89125-3
    1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3

```

```

m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
    6012.50c 1.99282-2
    1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc -17 -17 0 0 -17 0 17 -17 0
      -17 0 0 0 0 0 17 0 0
      -17 17 0 0 17 0 17 17 0
print

```

```

MAG20
1 1 -6.9037 -1 -3 +4 u=1
2 4 -0.8019 -1 +3 -5 u=1
3 0 -1 +5 -6 u=1
4 2 -7.9200 +1 -2 -7 +8 u=1
5 2 -7.9200 -1 +6 -7 u=1
6 2 -7.9200 -1 -4 +8 u=1
7 0 +2:-7:-8 u=1
8 0 -9 +10 -11 +12 u=2 fill=1 lat=1
9 0 -13 +14 -15 +16 -17 +18 fill=2
10 3 -0.9200 #9 -19 +20 -21 +22 -23 +24
11 0 +19:-20:+21:-22:+23:-24

```

```

$CYLINDER OF URANIUM DIOXIDE WITH ALCOHOL
$ALCOHOL LAYER ABOVE OXIDE
$VOID
$STAINLESS STEEL CONTAINER
$STAINLESS STEEL (TOP)
$STAINLESS STEEL (BOTTOM)
$VOID
$CELL FILLED WITH 1-7
$3X3X1 ARRAY
$POLYETHYLENE REFLECTOR
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 6.76
2 cz 6.79
3 pz +5.27
4 pz -12.60
5 pz +5.80
6 pz +12.58
7 pz +12.63
8 pz -12.63
9 px +8.652
10 px -8.652
11 py +8.652
12 py -8.652
13 px +25.955999
14 px -25.955999
15 py +25.955999
16 py -25.955999
17 pz +12.78
18 pz -12.78
19 px +40.956
20 px -40.956
21 py +40.956
22 py -40.956
23 pz +27.78
24 pz -27.78

```

```

mode n
imp;n 1 9r 0
m1 92234.50c 1.48591-4
    92235.50c 1.39213-2
    92236.50c 3.86922-5
    92238.50c 8.26350-4
    8016.50c 3.37790-2
    6012.50c 6.89125-3
    1001.50c 2.16009-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 1001.50c 7.90600-2
    6012.50c 3.95300-2
mt3 poly.01t
m4 8016.50c 1.13047-2
    6012.50c 1.99282-2
    1001.50c 6.24659-2
mt4 lwtr.01t
kcode 1000 1.0 10 100
ksrc -17 -17 0 0 -17 0 17 -17 0
      -17 0 0 0 0 0 17 0 0
      -17 17 0 0 17 0 17 17 0
print

```

```

ROT1
1 1 -1.2038 -1 +3 -4 $CYLINDER OF URANYL NITRATE
2 0 -1 +4 -5 $CYLINDER VOID (ABOVE SOLUTION)
3 2 -7.9200 +1 -2 -5 +6 : -1 -3 +6 $CYLINDER OF STAINLESS STEEL
4 0 +2:+5:-6 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0

```

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4 pz +31.20
5 pz +41.60
6 pz -0.64

mode n

imp:n 1 1 1 0

m1 92234.50c 3.83099-6
92235.50c 3.47765-4
92236.50c 1.61304-6
92238.50c 1.97978-5
7014.50c 9.23065-4
8016.50c 3.50450-2
1001.50c 6.32366-2

mt1 lwtr.01t

m2 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT2

1 1 -1.2023 -1 +4 -5 \$CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 \$CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -6 : -1 +3 -4 \$CYLINDER OF STAINLESS STEEL
4 0 +2 -7 +8 -9 +10 -11 +12 \$CUBOID VOID
5 0 -2 +6 -11 \$VOID
6 0 -2 -3 +12 \$VOID
7 3 -2.3210 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 \$CONCRETE REFLECTOR (SIDES)
8 0 -13 +14 -15 +16 +11 -17 \$VOID
9 0 -13 +14 -15 +16 -12 +18 \$VOID
10 3 -2.3210 -13 +14 -15 +16 +17 -19 \$CONCRETE REFLECTOR (TOP)
11 3 -2.3210 -13 +14 -15 +16 -18 +20 \$CONCRETE REFLECTOR (BOTTOM)
12 0 +13:-14:+15:-16:+19:-20 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +30.43
6 pz +42.24
7 px +64.6
8 px -57.2
9 py +57.4
10 py -64.8
11 pz +81.1
12 pz -40.8
13 px +90.3
14 px -82.9
15 py +83.1
16 py -90.5
17 pz +82.0
18 pz -41.7
19 pz +107.7
20 pz -67.4

mode n

imp:n 1 10r 0

m1 92234.50c 3.79680-6
92235.50c 3.44662-4
92236.50c 1.59864-6
92238.50c 1.96211-5
7014.50c 9.03160-4
8016.50c 3.50471-2
1001.50c 6.33603-2

mt1 lwtr.01t

m2 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3

m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

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```

ROT3
1 1 -1.2023 -1 +4 -6 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -7 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -8 +9 -10 +11 +5 -12 $CUBOID VOID
5 0 -2 +7 -12 $VOID
6 3 -2.3210 (+8:-9:+10:-11) -13 +14 -15 +16 +5 -12 $CONCRETE REFLECTOR (SIDES)
7 0 +2 -13 +14 -15 +16 +3 -5 $VOID
8 0 -13 +14 -15 +16 +12 -17 $VOID
9 3 -2.3210 -13 +14 -15 +16 +17 -18 $CONCRETE REFLECTOR (TOP)
10 3 -2.3210 -13 +14 -15 +16 -3 +19 $CONCRETE REFLECTOR (BOTTOM)
11 0 +13:-14:+15:-16:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +0.90
6 pz +24.83
7 pz +42.24
8 px +104.1
9 px -17.31
10 py +16.76
11 py -105.6
12 pz +122.8
13 px +129.8
14 px -43.01
15 py +42.46
16 py -131.3
17 pz +123.7
18 pz +149.4
19 pz -25.7

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 3.79680-6
    92235.50c 3.44662-4
    92236.50c 1.59864-6
    92238.50c 1.96211-5
    7014.50c 9.03160-4
    8016.50c 3.50471-2
    1001.50c 6.33603-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT4 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.2069 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +30.35
6 pz +42.24
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4

```

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```

ROT3
1 1 -1.2023 -1 +4 -6 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -7 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -8 +9 -10 +11 +5 -12 $CUBOID VOID
5 0 -2 +7 -12 $VOID
6 3 -2.3210 (+8:-9:+10:-11) -13 +14 -15 +16 +5 -12 $CONCRETE REFLECTOR (SIDES)
7 0 +2 -13 +14 -15 +16 +3 -5 $VOID
8 0 -13 +14 -15 +16 +12 -17 $VOID
9 3 -2.3210 -13 +14 -15 +16 +17 -18 $CONCRETE REFLECTOR (TOP)
10 3 -2.3210 -13 +14 -15 +16 -3 +19 $CONCRETE REFLECTOR (BOTTOM)
11 0 +13:-14:+15:-16:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +0.90
6 pz +24.83
7 pz +42.24
8 px +104.1
9 px -17.31
10 py +16.76
11 py -105.6
12 pz +122.8
13 px +129.8
14 px -43.01
15 py +42.46
16 py -131.3
17 pz +123.7
18 pz +149.4
19 pz -25.7

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 3.79680-6
    92235.50c 3.44662-4
    92236.50c 1.59864-6
    92238.50c 1.96211-5
    7014.50c 9.03160-4
    8016.50c 3.50471-2
    1001.50c 6.33603-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT4 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.2069 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +30.35
6 pz +42.24
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4

```

12 pz -41.5
 13 px +82.0
 14 px -82.5
 15 py +81.2
 16 py -83.3
 17 pz +101.6
 18 pz -62.3

mode n

imp:n 1 8r 0
 m1 92234.50c 3.88306-6
 92235.50c 3.52492-4
 92236.50c 1.63496-6
 92238.50c 2.00669-5
 7014.50c 9.19354-4
 8016.50c 3.50860-2
 1001.50c 6.33067-2

mt1 lwtr.01t

m2 24000.50c 1.74286-2
 25055.51c 1.73633-3
 26000.50c 5.93579-2

m3 28000.50c 7.72074-3

8016.50c 1.42047-2

1001.50c 5.68187-2

6012.50c 3.55117-2

m4 7014.50c 5.5290-5

8016.50c 1.4231-2

1001.50c 5.5166-2

6012.50c 3.3966-2

15031.51c 3.8504-4

17000.50c 3.5605-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT5 BROMINE LEFT OUT OF PLEXIGLASS (M4)

1 1 -1.2069 -1 +4 -5 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +5 -6 \$CYLINDER VOID
 3 2 -7.9200 +1 -2 +3 -6 : -1 +3 -4 \$CYLINDER OF STAINLESS STEEL
 4 0 +2 -7 +8 -9 +10 +3 -11 \$CUBOID VOID
 5 0 -2 +6 -11 \$VOID
 6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 \$PLEXIGLASS REFLECTOR (SIDES)
 7 4 -1.286 -12 +13 -14 +15 +11 -16 \$PLEXIGLASS REFLECTOR (TOP)
 8 4 -1.286 -12 +13 -14 +15 -3 +17 \$PLEXIGLASS REFLECTOR (BOTTOM)
 9 0 +12:-13:+14:-15:+16:-17 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 13.96

2 cz 14.28

3 pz 0.0

4 pz +0.64

5 pz +25.67

6 pz +42.24

7 px +105.0

8 px -17.91

9 py +17.06

10 py -105.6

11 pz +122.9

12 px +125.8

13 px -38.71

14 py +37.86

15 py -126.4

16 pz +143.1

17 pz -20.8

mode n

imp:n 1 7r 0
 m1 92234.50c 3.88306-6
 92235.50c 3.52492-4
 92236.50c 1.63496-6
 92238.50c 2.00669-5
 7014.50c 9.19354-4
 8016.50c 3.50860-2
 1001.50c 6.33067-2

mt1 lwtr.01t

m2 24000.50c 1.74286-2

25055.51c 1.73633-3

26000.50c 5.93579-2

m3 28000.50c 7.72074-3

8016.50c 1.42047-2

1001.50c 5.68187-2

6012.50c 3.55117-2

m4 7014.50c 5.5290-5

8016.50c 1.4231-2

1001.50c 5.5166-2

6012.50c 3.3966-2

15031.51c 3.8504-4

17000.50c 3.5605-4

kcode 1000 1.0 10 100

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ksrc 0 0 5
print

ROT6

1	1	-1.48	-1 +3 -4	\$CYLINDER OF URANYL NITRATE
2	0		-1 +4 -5	\$CYLINDER VOID (ABOVE SOLUTION)
3	2	-7.9200	+1 -2 -5 +6 : -1 -3 +6	\$CYLINDER OF STAINLESS STEEL
4	0		+2:+5:-6	\$ZERO IMPORTANCE OUTSIDE WORLD

1	cz	13.96
2	cz	14.28
3	pz	0.0
4	pz	+28.93
5	pz	+41.60
6	pz	-0.64

mode n

imp:n 1 1 1 0

m1	92234.50c	9.11806-6
	92235.50c	8.27710-4
	92236.50c	3.83915-6
	92238.50c	4.71203-5
	7014.50c	2.10197-3
	8016.50c	3.71438-2
	1001.50c	5.84509-2

mt1 lwtr.01t

m2	24000.50c	1.74286-2	25055.51c	1.73633-3	26000.50c	5.93579-2
	28000.50c	7.72074-3				

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT7

1	1	-1.4636	-1 +4 -5	\$CYLINDER OF URANYL NITRATE
2	0		-1 +5 -6	\$CYLINDER VOID
3	2	-7.9200	+1 -2 +3 -6 : -1 +3 -4	\$CYLINDER OF STAINLESS STEEL
4	0		+2 -7 +8 -9 +10 -11 +12	\$CUBOID VOID
5	0		-2 +6 -11 : -2 -3 +12	\$VOID
6	3	-2.3210	(+7:-8:+9:-10) -13 +14 -15 +16 -11 +12	\$CONCRETE REFLECTOR (SIDES)
7	0		-13 +14 -15 +16 +11 -17	\$VOID
8	0		-13 +14 -15 +16 -12 +18	\$VOID
9	3	-2.3210	-13 +14 -15 +16 +17 -19	\$CONCRETE REFLECTOR (TOP)
10	3	-2.3210	-13 +14 -15 +16 -18 +20	\$CONCRETE REFLECTOR (BOTTOM)
11	0		+13:-14:+15:-16:+19:-20	\$ZERO IMPORTANCE OUTSIDE WORLD

1	cz	13.96
2	cz	14.28
3	pz	0.0
4	pz	+0.64
5	pz	+27.87
6	pz	+42.24
7	px	+64.6
8	px	-57.2
9	py	+57.4
10	py	-64.8
11	pz	+81.1
12	pz	-40.8
13	px	+90.3
14	px	-82.9
15	py	+83.1
16	py	-90.5
17	pz	+82.0
18	pz	-41.7
19	pz	+107.7
20	pz	-67.4

mode n

imp:n 1 9r 0

m1	92234.50c	8.80354-6
	92235.50c	7.99159-4
	92236.50c	3.70673-6
	92238.50c	4.54949-5
	7014.50c	2.02808-3
	8016.50c	3.70218-2
	1001.50c	5.87602-2

mt1 lwtr.01t

m2	24000.50c	1.74286-2
	25055.51c	1.73633-3
	26000.50c	5.93579-2
	28000.50c	7.72074-3
m3	7014.50c	1.99630-5
	8016.50c	4.23724-2
	1001.50c	1.04019-2
	6012.50c	6.42959-3
	11023.50c	3.83034-4
	12000.51c	7.18850-4
	13027.50c	1.12412-3

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14000.50c	7.71398-3
16032.51c	8.28261-5
19000.51c	4.89721-4
20000.51c	8.02089-3
22000.51c	2.91932-5
26000.50c	2.52793-4

kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

ROT8
1 1 -1.4636 -1 +4 -6 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -7 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -8 +9 -10 +11 +5 -12 $CUBOID VOID
5 0 -2 +7 -12 $VOID
6 3 -2.3210 (+8:-9:+10:-11) -13 +14 -15 +16 +5 -12 $CONCRETE REFLECTOR (SIDES)
7 0 +2 -13 +14 -15 +16 +3 -5 $VOID
8 0 -13 +14 -15 +16 +12 -17 $VOID
9 3 -2.3210 -13 +14 -15 +16 +17 -18 $CONCRETE REFLECTOR (TOP)
10 3 -2.3210 -13 +14 -15 +16 -3 +19 $CONCRETE REFLECTOR (BOTTOM)
11 0 +13:-14:+15:-16:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +0.90
6 pz +22.43
7 pz +42.24
8 px +104.1
9 px -17.31
10 py +16.76
11 py -105.6
12 pz +122.8
13 px +129.8
14 px -43.01
15 py +42.46
16 py -131.3
17 pz +123.7
18 pz +149.4
19 pz -25.7

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 8.80354-6
    92235.50c 7.99159-4
    92236.50c 3.70673-6
    92238.50c 4.54949-5
    7014.50c 2.02808-3
    8016.50c 3.70218-2
    1001.50c 5.87602-2
mt1 lwtr.01c
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT9 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.4779 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 : -2 -3 +12 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +28.24
6 pz +42.24
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4
12 pz -41.5

```

13 px +82.0
 14 px -82.5
 15 py +81.2
 16 py -83.3
 17 pz +101.6
 18 pz -62.3

mode n

imp:n 1 7r 0

m1 92234.50c 9.08124-6
 92235.50c 8.24367-4
 92236.50c 3.82365-6
 92238.50c 4.69300-5
 7014.50c 2.08999-3
 8016.50c 3.71251-2
 1001.50c 5.84951-2

mt1 lwtr.01t

m2 24000.50c 1.74286-2
 25055.51c 1.73633-3
 26000.50c 5.93579-2
 28000.50c 7.72074-3

m3 8016.50c 1.42047-2
 1001.50c 5.68187-2
 6012.50c 3.55117-2

m4 7014.50c 5.5290-5
 8016.50c 1.4231-2
 1001.50c 5.5166-2
 6012.50c 3.3966-2
 15031.51c 3.8504-4
 17000.50c 3.5605-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT11

1 1 -1.2007 -1 +3 -4 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +4 -5 \$CYLINDER VOID
 3 2 -2.737 +1 -2 -5 +6 : -1 -3 +6 \$CYLINDER OF ALUMINUM
 4 0 +2:+5:-6 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 14.005
 2 cz 14.325
 3 pz 0.0
 4 pz +33.55
 5 pz +41.9
 6 pz -0.64

mode n

imp:n 1 1 1 0

m1 92234.50c 3.75841-6
 92235.50c 3.41177-4
 92236.50c 1.58248-6
 92238.50c 1.94227-6
 7014.50c 9.02307-4
 8016.50c 3.50416-2
 1001.50c 6.33760-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT12

1 1 -1.2023 -1 +4 -5 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +5 -6 \$CYLINDER VOID
 3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 \$CYLINDER OF ALUMINUM
 4 0 +2 -7 +8 -9 +10 -11 +12 \$CUBOID VOID
 5 0 -2 +6 -11 \$VOID
 6 0 -2 -3 +12 \$VOID
 7 3 -2.3210 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 \$CONCRETE REFLECTOR (SIDES)
 8 0 -13 +14 -15 +16 +11 -17 \$VOID
 9 0 -13 +14 -15 +16 -12 +18 \$VOID
 10 3 -2.3210 -13 +14 -15 +16 +17 -19 \$CONCRETE REFLECTOR (TOP)
 11 3 -2.3210 -13 +14 -15 +16 -18 +20 \$CONCRETE REFLECTOR (BOTTOM)
 12 0 +13:-14:+15:-16:+19:-20 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 14.005
 2 cz 14.325
 3 pz 0.0

4 pz +0.64
 5 pz +32.01
 6 pz +42.54
 7 px +64.6
 8 px -57.2
 9 py +57.4
 10 py -64.8
 11 pz +81.1
 12 pz -40.8
 13 px +90.3
 14 px -82.9
 15 py +83.1
 16 py -90.5
 17 pz +82.0
 18 pz -41.7
 19 pz +107.7
 20 pz -67.4

mode n
 imp:n 1 10r 0
 m1 92234.50c 3.79680-6
 92235.50c 3.44662-4
 92236.50c 1.59864-6
 92238.50c 1.96211-5
 7014.50c 9.03160-4
 8016.50c 3.50471-2
 1001.50c 6.33603-2
 mt1 lwtr.01t
 m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5
 m3 7014.50c 1.99630-5
 8016.50c 4.23724-2
 1001.50c 1.04019-2
 6012.50c 6.42959-3
 11023.50c 3.83034-4
 12000.51c 7.18850-4
 13027.50c 1.12412-3
 14000.50c 7.71398-3
 16032.51c 8.28261-5
 19000.51c 4.89721-4
 20000.51c 8.02089-3
 22000.51c 2.91932-5
 26000.50c 2.52793-4
 kcode 1000 1.0 10 100
 ksrc 0 0 5
 print

ROT13
 1 1 -1.2023 -1 +4 -6 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +6 -7 \$CYLINDER VOID
 3 2 -2.737 +1 -2 +3 -7 : -1 +3 -4 \$CYLINDER OF ALUMINUM
 4 0 +2 -8 +9 -10 +11 +5 -12 \$CUBOID VOID
 5 0 -2 +7 -12 \$VOID
 6 3 -2.3210 (+8:-9:+10:-11) -13 +14 -15 +16 +5 -12 \$CONCRETE REFLECTOR (SIDES)
 7 0 +2 -13 +14 -15 +16 +3 -5 \$VOID
 8 0 -13 +14 -15 +16 +12 -17 \$VOID
 9 3 -2.3210 -13 +14 -15 +16 +17 -18 \$CONCRETE REFLECTOR (TOP)
 10 3 -2.3210 -13 +14 -15 +16 -3 +19 \$CONCRETE REFLECTOR (BOTTOM)
 11 0 +13:-14:+15:-16:+18:-19 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 14.005
 2 cz 14.325
 3 pz 0.0
 4 pz +0.64
 5 pz +0.90
 6 pz +25.34
 7 pz +42.54
 8 px +104.1
 9 px -17.8
 10 py +16.5
 11 py -105.6
 12 pz +122.8
 13 px +129.8
 14 px -43.5
 15 py +42.2
 16 py -131.3
 17 pz +123.7
 18 pz +149.4
 19 pz -25.7

mode n
 imp:n 1 9r 0
 m1 92234.50c 3.79680-6
 92235.50c 3.44662-4
 92236.50c 1.59864-6


```

92238.50c 1.96211-5
7014.50c 9.03160-4
8016.50c 3.50471-2
1001.50c 6.33603-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print
ROT14 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.2069 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

1 cz 14.005
2 cz 14.325
3 pz 0.0
4 pz +0.64
5 pz +31.90
6 pz +42.54
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4
12 pz -41.5
13 px +82.0
14 px -82.5
15 py +81.2
16 py -83.3
17 pz +101.6
18 pz -62.3

mode n
imp:n 1 8r 0
m1 92234.50c 3.88306-6
92235.50c 3.52492-4
92236.50c 1.63496-6
92238.50c 2.00669-5
7014.50c 9.19354-4
8016.50c 3.50860-2
1001.50c 6.33067-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100

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```

92238.50c 1.96211-5
7014.50c 9.03160-4
8016.50c 3.50471-2
1001.50c 6.33603-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print
ROT14 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.2069 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

1 cz 14.005
2 cz 14.325
3 pz 0.0
4 pz +0.64
5 pz +31.90
6 pz +42.54
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4
12 pz -41.5
13 px +82.0
14 px -82.5
15 py +81.2
16 py -83.3
17 pz +101.6
18 pz -62.3

mode n
imp:n 1 8r 0
m1 92234.50c 3.88306-6
92235.50c 3.52492-4
92236.50c 1.63496-6
92238.50c 2.00669-5
7014.50c 9.19354-4
8016.50c 3.50860-2
1001.50c 6.33067-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100

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ksrc 0 0 5
print

ROT15 BROMINE LEFT OUT OF PLEXIGLASS (M4)

1	1	-1.2069	-1 +4 -5	\$CYLINDER OF URANYL NITRATE
2	0		-1 +5 -6	\$CYLINDER VOID
3	2	-2.737	+1 -2 +3 -6 : -1 +3 -4	\$CYLINDER OF ALUMINUM
4	0		+2 -7 +8 -9 +10 +3 -11	\$CUBOID VOID
5	0		-2 +6 -11	\$VOID
6	3	-1.1800	(+7:-8:+9:-10) -12 +13 -14 +15 +3 -11	\$PLEXIGLASS REFLECTOR (SIDES)
7	4	-1.286	-12 +13 -14 +15 +11 -16	\$PLEXIGLASS REFLECTOR (TOP)
8	4	-1.286	-12 +13 -14 +15 -3 +17	\$PLEXIGLASS REFLECTOR (BOTTOM)
9	0		+12:-13:+14:-15:+16:-17	\$ZERO IMPORTANCE OUTSIDE WORLD

1	cz	14.005
2	cz	14.325
3	pz	0.0
4	pz	+0.64
5	pz	+25.90
6	pz	+42.54
7	px	+105.0
8	px	-17.95
9	py	+17.52
10	py	-105.6
11	pz	+122.9
12	px	+125.8
13	px	-38.75
14	py	+38.32
15	py	-126.4
16	pz	+143.1
17	pz	-20.8

mode n

imp:n 1 7r 0

m1	92234.50c	3.88306-6
	92235.50c	3.52492-4
	92236.50c	1.63496-6
	92238.50c	2.00669-5
	7014.50c	9.19354-4
	8016.50c	3.50860-2
	1001.50c	6.33067-2

mt1 lwtr.01t

m2	12000.51c	6.78153-4
	13027.50c	5.95056-2
	14000.50c	3.52126-4
	22000.51c	1.03277-5
	24000.50c	5.38898-5
	25055.51c	2.10015-5
	26000.50c	1.38721-4
	29000.50c	6.42881-5
m3	8016.50c	1.42047-2
	1001.50c	5.68187-2
	6012.50c	3.55117-2
m4	7014.50c	5.5290-5
	8016.50c	1.4231-2
	1001.50c	5.5166-2
	6012.50c	3.3966-2
	15031.51c	3.8504-4
	17000.50c	3.5605-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT16

1	1	-1.4951	-1 +3 -4	\$CYLINDER OF URANYL NITRATE
2	0		-1 +4 -5	\$CYLINDER VOID
3	2	-2.7370	+1 -2 -5 +6 : -1 -3 +6	\$CYLINDER OF ALUMINUM
4	0		+2:+5:-6	\$ZERO IMPORTANCE OUTSIDE WORLD

1	cz	14.005
2	cz	14.325
3	pz	0.0
4	pz	+30.91
5	pz	+41.9
6	pz	-0.64

mode n

imp:n 1 1 1 0

m1	92234.50c	9.40680-6
	92235.50c	8.53921-4
	92236.50c	3.96073-6
	92238.50c	4.86125-5
	7014.50c	2.16242-3
	8016.50c	3.72609-2
	1001.50c	5.82143-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4

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```

13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT17
1 1 -1.4636 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -2.3210 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $CONCRETE REFLECTOR (SIDES)
8 0 -13 +14 -15 +16 +11 -17 $VOID
9 0 -13 +14 -15 +16 -12 +18 $VOID
10 3 -2.3210 -13 +14 -15 +16 +17 -19 $CONCRETE REFLECTOR (TOP)
11 3 -2.3210 -13 +14 -15 +16 -18 +20 $CONCRETE REFLECTOR (BOTTOM)
12 0 +13:-14:+15:-16:+19:-20 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 14.005
2 cz 14.325
3 pz 0.0
4 pz +0.64
5 pz +29.24
6 pz +42.54
7 px +64.6
8 px -57.2
9 py +57.4
10 py -64.8
11 pz +81.1
12 pz -40.8
13 px +90.3
14 px -82.9
15 py +83.1
16 py -90.5
17 pz +82.0
18 pz -41.7
19 pz +107.7
20 pz -67.4

```

```

mode n
imp:n 1 10r 0
m1 92234.50c 8.80354-6
92235.50c 7.99159-4
92236.50c 3.70673-6
92238.50c 4.54949-5
7014.50c 2.02808-3
8016.50c 3.70218-2
1001.50c 5.87602-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4

```

```

kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT18
1 1 -1.4636 -1 +4 -6 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -7 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -8 +9 -10 +11 +5 -12 $CUBOID VOID
5 0 -2 +7 -12 $VOID
6 3 -2.3210 (+8:-9:+10:-11) -13 +14 -15 +16 +5 -12 $CONCRETE REFLECTOR (SIDES)
7 0 +2 -13 +14 -15 +16 +3 -5 $VOID
8 0 -13 +14 -15 +16 +12 -17 $VOID

```

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```

9 3 -2.3210 -13 +14 -15 +16 +17 -18 $CONCRETE REFLECTOR (TOP)
10 3 -2.3210 -13 +14 -15 +16 -3 +19 $CONCRETE REFLECTOR (BOTTOM)
11 0 +13:-14:+15:-16:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 14.005
2 cz 14.325
3 pz 0.0
4 pz +0.64
5 pz +0.90
6 pz +22.97
7 pz +42.54
8 px +104.1
9 px -18.05
10 py +16.65
11 py -105.6
12 pz +122.8
13 px +129.8
14 px -43.75
15 py +42.35
16 py -131.3
17 pz +123.7
18 pz +149.4
19 pz -25.7

```

mode n

imp:n 1 gr 0

```

m1 92234.50c 8.80354-6
    92235.50c 7.99159-4
    92236.50c 3.70673-6
    92238.50c 4.54949-5
    7014.50c 2.02808-3
    8016.50c 3.70218-2
    1001.50c 5.87602-2

```

mt1 lwtr.01t

```

m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4

```

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT19 BROMINE LEFT OUT OF PLEXIGLASS (M4)

```

1 1 -1.4779 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 14.005
2 cz 14.325
3 pz 0.0
4 pz +0.64
5 pz +29.48
6 pz +42.54
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4
12 pz -41.5
13 px +82.0
14 px -82.5
15 py +81.2
16 py -83.3
17 pz +101.6

```

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18 pz -62.3

mode n

imp:n 1 8r 0

m1	92234.50c	9.08124-6
	92235.50c	8.24367-4
	92236.50c	3.82365-6
	92238.50c	4.69300-5
	7014.50c	2.08999-3
	8016.50c	3.71251-2
	1001.50c	5.84951-2

mt1 lwtr.01t

m2	12000.51c	6.78153-4
	13027.50c	5.95056-2
	14000.50c	3.52126-4
	22000.51c	1.03277-5
	24000.50c	5.38898-5
	25055.51c	2.10015-5
	26000.50c	1.38721-4
	29000.50c	6.42881-5

m3 8016.50c 1.42047-2

1001.50c 5.68187-2

6012.50c 3.55117-2

m4 7014.50c 5.5290-5

8016.50c 1.4231-2

1001.50c 5.5166-2

6012.50c 3.3966-2

15031.51c 3.8504-4

17000.50c 3.5605-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT20 BROMINE LEFT OUT OF PLEXIGLASS (M4)

1	1	-1.4779	-1 +4 -5	\$CYLINDER OF URANYL NITRATE
2	0		-1 +5 -6	\$CYLINDER VOID
3	2	-2.737	+1 -2 +3 -6 : -1 +3 -4	\$CYLINDER OF ALUMINUM
4	0		+2 -7 +8 -9 +10 +3 -11	\$CUBOID VOID
5	0		-2 +6 -11	\$VOID
6	3	-1.1800	(+7:-8:+9:-10) -12 +13 -14 +15 +3 -11	\$PLEXIGLASS REFLECTOR (SIDES)
7	4	-1.286	-12 +13 -14 +15 +11 -16	\$PLEXIGLASS REFLECTOR (TOP)
8	4	-1.286	-12 +13 -14 +15 -3 +17	\$PLEXIGLASS REFLECTOR (BOTTOM)
9	0		+12:-13:+14:-15:+16:-17	\$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 14.005

2 cz 14.325

3 pz 0.0

4 pz +0.64

5 pz +23.51

6 pz +42.54

7 px +105.0

8 px -17.8

9 py +17.5

10 py -105.6

11 pz +122.9

12 px +125.8

13 px -38.6

14 py +38.3

15 py -126.4

16 pz +143.1

17 pz -20.8

mode n

imp:n 1 7r 0

m1	92234.50c	9.08124-6
	92235.50c	8.24367-4
	92236.50c	3.82365-6
	92238.50c	4.69300-5
	7014.50c	2.08999-3
	8016.50c	3.71251-2
	1001.50c	5.84951-2

mt1 lwtr.01t

m2	12000.51c	6.78153-4
	13027.50c	5.95056-2
	14000.50c	3.52126-4
	22000.51c	1.03277-5
	24000.50c	5.38898-5
	25055.51c	2.10015-5
	26000.50c	1.38721-4
	29000.50c	6.42881-5

m3 8016.50c 1.42047-2

1001.50c 5.68187-2

6012.50c 3.55117-2

m4 7014.50c 5.5290-5

8016.50c 1.4231-2

1001.50c 5.5166-2

6012.50c 3.3966-2

15031.51c 3.8504-4

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17000.50c 3.5605-4
 kcode 1000 1.0 10 100
 ksrc 0 0 5
 print

ROT21
 1 1 -1.2038 -1 +3 -4 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +4 -5 \$CYLINDER VOID
 3 2 -2.737 +1 -2 -5 +6 : -1 -3 +6 \$CYLINDER OF ALUMINUM
 4 0 +2:+5:-6 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 16.505
 2 cz 16.825
 3 pz 0.0
 4 pz +23.67
 5 pz +49.5
 6 pz -0.64

mode n
 imp:n 1 1 1 0
 m1 92234.50c 3.83099-6
 92235.50c 3.47765-4
 92236.50c 1.61304-6
 92238.50c 1.97978-5
 7014.50c 9.23065-4
 8016.50c 3.50450-2
 1001.50c 6.32366-2
 mt1 lwtr.01t
 m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5
 kcode 1000 1.0 10 100
 ksrc 0 0 5
 print

ROT22
 1 1 -1.2023 -1 +4 -5 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +5 -6 \$CYLINDER VOID
 3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 \$CYLINDER OF ALUMINUM
 4 0 +2 -7 +8 -9 +10 -11 +12 \$CUBOID VOID
 5 0 -2 +6 -11 \$VOID
 6 0 -2 -3 +12 \$VOID
 7 3 -2.3210 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 \$CONCRETE REFLECTOR (SIDES)
 8 0 -13 +14 -15 +16 +11 -17 \$VOID
 9 0 -13 +14 -15 +16 -12 +18 \$VOID
 10 3 -2.3210 -13 +14 -15 +16 +17 -19 \$CONCRETE REFLECTOR (TOP)
 11 3 -2.3210 -13 +14 -15 +16 -18 +20 \$CONCRETE REFLECTOR (BOTTOM)
 12 0 +13:-14:+15:-16:+19:-20 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 16.505
 2 cz 16.825
 3 pz 0.0
 4 pz +0.64
 5 pz +23.49
 6 pz +50.14
 7 px +64.6
 8 px -57.2
 9 py +57.4
 10 py -64.8
 11 pz +81.1
 12 pz -40.8
 13 px +90.3
 14 px -82.9
 15 py +83.1
 16 py -90.5
 17 pz +82.0
 18 pz -41.7
 19 pz +107.7
 20 pz -67.4

mode n
 imp:n 1 10r 0
 m1 92234.50c 3.79680-6
 92235.50c 3.44662-4
 92236.50c 1.59864-6
 92238.50c 1.96211-5
 7014.50c 9.03160-4
 8016.50c 3.50471-2
 1001.50c 6.33603-2
 mt1 lwtr.01t
 m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5

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```

24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT23
1 1 -1.2023 -1 +4 -6 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -7 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -8 +9 -10 +11 +5 -12 $CUBOID VOID
5 0 -2 +7 -12 $VOID
6 3 -2.3210 (+8:-9:-10:-11) -13 +14 -15 +16 +5 -12 $CONCRETE REFLECTOR (SIDES)
7 0 +2 -13 +14 -15 +16 +3 -5 $VOID
8 0 -13 +14 -15 +16 +12 -17 $VOID
9 3 -2.3210 -13 +14 -15 +16 +17 -18 $CONCRETE REFLECTOR (TOP)
10 3 -2.3210 -13 +14 -15 +16 -3 +19 $CONCRETE REFLECTOR (BOTTOM)
11 0 +13:-14:+15:-16:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +0.90
6 pz +18.88
7 pz +50.14
8 px +104.1
9 px -17.92
10 py +16.825
11 py -105.6
12 pz +122.8
13 px +129.8
14 px -43.62
15 py +42.525
16 py -131.3
17 pz +123.7
18 pz +149.4
19 pz -25.7

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 3.79680-6
92235.50c 3.44662-4
92236.50c 1.59864-6
92238.50c 1.96211-5
7014.50c 9.03160-4
8016.50c 3.50471-2
1001.50c 6.33603-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```



```

ROT24  BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.2069 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +23.42
6 pz +50.14
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4
12 pz -41.5
13 px +82.0
14 px -82.5
15 py +81.2
16 py -83.3
17 pz +101.6
18 pz -62.3

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 3.88306-6
    92235.50c 3.52492-4
    92236.50c 1.63496-6
    92238.50c 2.00669-5
    7014.50c 9.19354-4
    8016.50c 3.50860-2
    1001.50c 6.33067-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT25  BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.2069 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 +3 -11 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +19.13
6 pz +50.14
7 px +105.0
8 px -17.72
9 py +17.10
10 py -105.6
11 pz +122.9
12 px +125.8
13 px -38.52
14 py +37.9
15 py -126.4

```

16 pz +143.1
17 pz -20.8

mode n

imp:n 1 7r 0

m1 92234.50c 3.88306-6
92235.50c 3.52492-4
92236.50c 1.63496-6
92238.50c 2.00669-5
7014.50c 9.19354-4
8016.50c 3.50860-2
1001.50c 6.33067-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5

m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2

m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT26

1 1 -1.4951 -1 +3 -4 \$CYLINDER OF URANYL NITRATE
2 0 -1 +4 -5 \$CYLINDER VOID
3 2 -2.7370 +1 -2 -5 +6 : -1 -3 +6 \$CYLINDER OF ALUMINUM
4 0 +2:+5:-6 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +22.53
5 pz +49.5
6 pz -0.64

mode n

imp:n 1 1 1 0

m1 92234.50c 9.40680-6
92235.50c 8.53921-4
92236.50c 3.96073-6
92238.50c 4.86125-5
7014.50c 2.16242-3
8016.50c 3.72609-2
1001.50c 5.82143-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT27

1 1 -1.4636 -1 +4 -5 \$CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 \$CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 \$CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 \$CUBOID VOID
5 0 -2 +6 -11 \$VOID
6 0 -2 -3 +12 \$VOID
7 3 -2.3210 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 \$CONCRETE REFLECTOR (SIDES)
8 0 -13 +14 -15 +16 +11 -17 \$VOID
9 0 -13 +14 -15 +16 -12 +18 \$VOID
10 3 -2.3210 -13 +14 -15 +16 +17 -19 \$CONCRETE REFLECTOR (TOP)
11 3 -2.3210 -13 +14 -15 +16 -18 +20 \$CONCRETE REFLECTOR (BOTTOM)
12 0 +13:-14:+15:-16:+19:-20 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64

```

5 pz +22.14
6 pz +50.14
7 px +64.6
8 px -57.2
9 py +57.4
10 py -64.8
11 pz +81.1
12 pz -40.8
13 px +90.3
14 px -82.9
15 py +83.1
16 py -90.5
17 pz +82.0
18 pz -41.7
19 pz +107.7
20 pz -67.4

mode n
imp:n 1 10r 0
m1 92234.50c 8.80354-6
    92235.50c 7.99159-4
    92236.50c 3.70673-6
    92238.50c 4.54949-5
    7014.50c 2.02808-3
    8016.50c 3.70218-2
    1001.50c 5.87602-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT28
1 1 -1.4636 -1 +4 -6 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -7 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -8 +9 -10 +11 +5 -12 $CUBOID VOID
5 0 -2 +7 -12 $VOID
6 3 -2.3210 (+8:-9:+10:-11) -13 +14 -15 +16 +5 -12 $CONCRETE REFLECTOR (SIDES)
7 0 +2 -13 +14 -15 +16 +3 -5 $VOID
8 0 -13 +14 -15 +16 +12 -17 $VOID
9 3 -2.3210 -13 +14 -15 +16 +17 -18 $CONCRETE REFLECTOR (TOP)
10 3 -2.3210 -13 +14 -15 +16 -3 +19 $CONCRETE REFLECTOR (BOTTOM)
11 0 +13:-14:+15:-16:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +0.90
6 pz +17.42
7 pz +50.14
8 px +104.1
9 px -17.25
10 py +16.825
11 py -105.6
12 pz +122.8
13 px +129.8
14 px -42.95
15 py +42.525
16 py -131.3
17 pz +123.7
18 pz +149.4
19 pz -25.7

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 8.80354-6
    92235.50c 7.99159-4
    92236.50c 3.70673-6
    92238.50c 4.54949-5
    7014.50c 2.02808-3
    8016.50c 3.70218-2
    1001.50c 5.87602-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT29 BROMINE LEFT OUT OF PLEXIGLASS (H4)
1 1 -1.4779 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +22.31
6 pz +50.14
7 px +61.2
8 px -61.7

```

```

9  py +60.4
10 py -62.5
11 pz +81.4
12 pz -41.5
13 px +82.0
14 px -82.5
15 py +81.2
16 py -83.3
17 pz +101.6
18 pz -62.3

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 9.08124-6
    92235.50c 8.24367-4
    92236.50c 3.82365-6
    92238.50c 4.69300-5
    7014.50c 2.08999-3
    8016.50c 3.71251-2
    1001.50c 5.84951-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT30 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.4779 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 +3 -11 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 16.505
2  cz 16.825
3  pz 0.0
4  pz +0.64
5  pz +17.84
6  pz +50.14
7  px +105.0
8  px -17.7
9  py +17.3
10 py -105.6
11 pz +122.9
12 px +125.8
13 px -38.5
14 py +38.1
15 py -126.4
16 pz +143.1
17 pz -20.8

```

```

mode n
imp:n 1 7r 0
m1 92234.50c 9.08124-6
    92235.50c 8.24367-4
    92236.50c 3.82365-6
    92238.50c 4.69300-5
    7014.50c 2.08999-3
    8016.50c 3.71251-2
    1001.50c 5.84951-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5

```

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```

26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

ROT31 BROMINE LEFT OUT OF PLEXIGLASS (M4)

```

1 1 -1.0837 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -7 +8 -9 +10 +3 -11 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +51.16
6 pz +92.14
7 px +105.0
8 px -18.26
9 py +17.71
10 py -105.6
11 pz +122.9
12 px +125.8
13 px -39.06
14 py +38.51
15 py -126.4
16 pz +143.1
17 pz -20.8

```

mode n

```

imp:n 1 7r 0
m1 92234.50c 1.58625-6
    92235.50c 1.43995-4
    92236.50c 6.67891-7
    92238.50c 8.19743-6
    7014.50c 3.76944-4
    8016.50c 3.40819-2
    1001.50c 6.53523-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

ROT32 BROMINE LEFT OUT OF PLEXIGLASS (M4)

```

1 1 -1.0837 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -7.9200 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF STAINLESS STEEL
4 0 +2 -7 +8 -9 +10 +3 -11 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 13.96
2 cz 14.28
3 pz 0.0
4 pz +0.64
5 pz +68.12

```

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```

6 pz +92.14
7 px +61.3
8 px -61.6
9 py +61.6
10 py -61.8
11 pz +122.9
12 px +82.1
13 px -82.46
14 py +81.9
15 py -82.6
16 pz +143.1
17 pz -20.8

```

```

mode n
imp:n 1 7r 0
m1 92234.50c 1.58625-6
    92235.50c 1.43995-4
    92236.50c 6.67891-7
    92238.50c 8.19743-6
    7014.50c 3.76944-4
    8016.50c 3.40819-2
    1001.50c 6.53523-2
mt1 lwtr.01t
m2 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT33 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.0837 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 +3 -11 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 14.005
2 cz 14.325
3 pz 0.0
4 pz +0.64
5 pz +52.31
6 pz +77.54
7 px +105.0
8 px -17.75
9 py +17.51
10 py -105.6
11 pz +122.9
12 px +125.8
13 px -38.55
14 py +38.31
15 py -126.4
16 pz +143.1
17 pz -20.8

```

```

mode n
imp:n 1 7r 0
m1 92234.50c 1.58625-6
    92235.50c 1.43995-4
    92236.50c 6.67891-7
    92238.50c 8.19743-6
    7014.50c 3.76944-4
    8016.50c 3.40819-2
    1001.50c 6.53523-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5

```

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m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

ROT34 BROMINE LEFT OUT OF PLEXIGLASS (M4)

```

1 1 -1.0837 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 ; -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -1.1800 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -13 +14 -15 +16 +11 -17 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -13 +14 -15 +16 -12 +18 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +13:-14:+15:-16:+17:-18 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +34.97
6 pz +50.14
7 px +61.2
8 px -61.7
9 py +60.4
10 py -62.5
11 pz +81.4
12 pz -41.5
13 px +82.0
14 px -82.5
15 py +81.2
16 py -83.3
17 pz +101.6
18 pz -62.3

```

mode n

imp:n 1 8r 0

```

m1 92234.50c 1.58625-6
    92235.50c 1.43995-4
    92236.50c 6.67891-7
    92238.50c 8.19743-6
    7014.50c 3.76944-4
    8016.50c 3.40819-2
    1001.50c 6.53523-2

```

mt1

```

lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5

```

m3

```

    8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2

```

m4

```

    7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4

```

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT35 BROMINE LEFT OUT OF PLEXIGLASS (M4)

```

1 1 -1.0837 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 ; -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 +3 -11 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +28.34
6 pz +50.14
7 px +105.0
8 px -17.72
9 py +17.10
10 py -105.6
11 pz +122.9
12 px +125.8
13 px -38.52
14 py +37.90

```

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15 py -126.4
16 pz +143.1
17 pz -20.8

mode n

imp:n 1 7r 0

m1 92234.50c 1.58625-6
92235.50c 1.43995-4
92236.50c 6.67891-7
92238.50c 8.19743-6
7014.50c 3.76944-4
8016.50c 3.40819-2
1001.50c 6.53523-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT36 BROMINE LEFT OUT OF PLEXIGLASS (M4)

1 1 -1.0837 -1 +4 -5 \$CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 \$CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 \$CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 +3 -11 \$CUBOID VOID
5 0 -2 +6 -11 \$VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 \$PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 \$PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 \$PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +32.39
6 pz +50.14
7 px +61.3
8 px -61.6
9 py +61.1
10 py -61.8
11 pz +122.9
12 px +82.1
13 px -82.4
14 py +81.9
15 py -82.6
16 pz +143.1
17 pz -20.8

mode n

imp:n 1 7r 0

m1 92234.50c 1.58625-6
92235.50c 1.43995-4
92236.50c 6.67891-7
92238.50c 8.19743-6
7014.50c 3.76944-4
8016.50c 3.40819-2
1001.50c 6.53523-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2

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6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

ROT37  BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.0920 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 +3 -11 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 3 -1.1800 (+7:-8:+9:-10) -12 +13 -14 +15 +3 -11 $PLEXIGLASS REFLECTOR (SIDES)
7 4 -1.286 -12 +13 -14 +15 +11 -16 $PLEXIGLASS REFLECTOR (TOP)
8 4 -1.286 -12 +13 -14 +15 -3 +17 $PLEXIGLASS REFLECTOR (BOTTOM)
9 0 +12:-13:+14:-15:+16:-17 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +25.74
6 pz +50.14
7 px +105.0
8 px -17.72
9 py +17.10
10 py -105.6
11 pz +122.9
12 px +125.8
13 px -38.52
14 py +37.90
15 py -126.4
16 pz +143.1
17 pz -20.8

```

```

mode n
imp:n 1 7r 0
m1 92234.50c 1.74430-6
    92235.50c 1.58342-4
    92236.50c 7.34436-7
    92238.50c 9.01419-6
    7014.50c 4.11936-4
    8016.50c 3.41462-2
    1001.50c 6.52137-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT38
1 1 -1.0825 -1 +4 -5 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 $CYLINDER VOID
3 2 -2.737 +1 -2 +3 -6 : -1 +3 -4 $CYLINDER OF ALUMINUM
4 0 +2 -7 +8 -9 +10 -11 +12 $CUBOID VOID
5 0 -2 +6 -11 $VOID
6 0 -2 -3 +12 $VOID
7 3 -2.3210 (+7:-8:+9:-10) -13 +14 -15 +16 -11 +12 $CONCRETE REFLECTOR (SIDES)
8 0 -13 +14 -15 +16 +11 -17 $VOID
9 0 -13 +14 -15 +16 -12 +18 $VOID
10 3 -2.3210 -13 +14 -15 +16 +17 -19 $CONCRETE REFLECTOR (TOP)
11 3 -2.3210 -13 +14 -15 +16 -18 +20 $CONCRETE REFLECTOR (BOTTOM)
12 0 +13:-14:+15:-16:+19:-20 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +0.64
5 pz +37.74
6 pz +50.14
7 px +64.6
8 px -57.2
9 py +57.4
10 py -64.8
11 pz +81.1
12 pz -40.8
13 px +90.3
14 px -82.9
15 py +83.1

```

16 py -90.5
 17 pz +82.0
 18 pz -41.7
 19 pz +107.7
 20 pz -67.4

mode n

imp:n 1 10r 0

m1 92234.50c 1.56863-6
 92235.50c 1.42396-4
 92236.50c 6.60472-7
 92238.50c 8.10638-6
 7014.50c 3.74115-4
 8016.50c 3.40650-2
 1001.50c 6.53430-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5

m3

7014.50c 1.99630-5
 8016.50c 4.23724-2
 1001.50c 1.04019-2
 6012.50c 6.42959-3
 11023.50c 3.83034-4
 12000.51c 7.18850-4
 13027.50c 1.12412-3
 14000.50c 7.71398-3
 16032.51c 8.28261-5
 19000.51c 4.89721-4
 20000.51c 8.02089-3
 22000.51c 2.91932-5
 26000.50c 2.52793-4

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT39

1 1 -1.0825 -1 +4 -6 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +6 -7 \$CYLINDER VOID
 3 2 -2.737 +1 -2 +3 -7 : -1 +3 -4 \$CYLINDER OF ALUMINUM
 4 0 +2 -8 +9 -10 +11 +5 -12 \$CUBOID VOID
 5 0 -2 +7 -12 \$VOID
 6 3 -2.3210 (+8:-9:+10:-11) -13 +14 -15 +16 +5 -12 \$CONCRETE REFLECTOR (SIDES)
 7 0 +2 -13 +14 -15 +16 +3 -5 \$VOID
 8 0 -13 +14 -15 +16 +12 -17 \$VOID
 9 3 -2.3210 -13 +14 -15 +16 +17 -18 \$CONCRETE REFLECTOR (TOP)
 10 3 -2.3210 -13 +14 -15 +16 -3 +19 \$CONCRETE REFLECTOR (BOTTOM)
 11 0 +13:-14:+15:-16:+18:-19 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 16.505
 2 cz 16.825
 3 pz 0.0
 4 pz +0.64
 5 pz +0.90
 6 pz +27.91
 7 pz +50.14
 8 px +104.1
 9 px -17.92
 10 py +16.825
 11 py -105.6
 12 pz +122.8
 13 px +129.8
 14 px -43.62
 15 py +42.525
 16 py -131.3
 17 pz +123.7
 18 pz +149.4
 19 pz -25.7

mode n

imp:n 1 9r 0

m1 92234.50c 1.56863-6
 92235.50c 1.42396-4
 92236.50c 6.60472-7
 92238.50c 8.10638-6
 7014.50c 3.74115-4
 8016.50c 3.40650-2
 1001.50c 6.53430-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5

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```

25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT40
1 1 -1.0825 -1 +3 -4 $CYLINDER OF URANYL NITRATE
2 0 -1 +4 -5 $CYLINDER VOID
3 2 -2.7370 +1 -2 -5 +6 : -1 -3 +6 $CYLINDER OF ALUMINUM
4 0 +2:+5:-6 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +36.67
5 pz +49.50
6 pz -0.64

```

```

mode n
imp:n 1 1 1 0
m1 92234.50c 1.56863-6
92235.50c 1.42396-4
92236.50c 6.60472-7
92238.50c 8.10638-6
7014.50c 3.74115-4
8016.50c 3.40650-2
1001.50c 6.53430-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
kcode 1000 1.0 10 100
ksrc 0 0 5
print

```

```

ROT41
1 1 -1.0758 -1 +3 -4 $CYLINDER OF URANYL NITRATE
2 0 -1 +4 -5 $CYLINDER VOID
3 2 -2.7370 +1 -2 -5 +6 : -1 -3 +6 $CYLINDER OF ALUMINUM
4 0 +2:+5:-6 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 16.505
2 cz 16.825
3 pz 0.0
4 pz +39.48
5 pz +49.50
6 pz -0.64

```

```

mode n
imp:n 1 1 1 0
m1 92234.50c 1.44346-6
92235.50c 1.31033-4
92236.50c 6.07767-7
92238.50c 7.45950-6
7014.50c 3.44319-4
8016.50c 3.40108-2
1001.50c 6.54568-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
kcode 1000 1.0 10 100

```

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ksrc 0 0 5
print

ROT42

1	1	-1.1923	-1 +3 -4	\$CYLINDER OF URANYL NITRATE
2	0		-1 +4 -5	\$CYLINDER VOID
3	2	-2.7370	+1 -2 -5 +6 : -1 -3 +6	\$CYLINDER OF ALUMINUM
4	0		+2:+5:-6	\$ZERO IMPORTANCE OUTSIDE WORLD

1	cz	16.505
2	cz	16.825
3	pz	0.0
4	pz	+23.96
5	pz	+49.50
6	pz	-0.64

mode n

imp:n 1 1 1 0		
m1	92234.50c	3.61325-6
	92235.50c	3.27999-4
	92236.50c	1.52136-6
	92238.50c	1.86725-5
	7014.50c	8.76449-4
	8016.50c	3.49534-2
	1001.50c	6.34137-2
mt1	lwtr.01t	
m2	12000.51c	6.78153-4
	13027.50c	5.95056-2
	14000.50c	3.52126-4
	22000.51c	1.03277-5
	24000.50c	5.38898-5
	25055.51c	2.10015-5
	26000.50c	1.38721-4
	29000.50c	6.42881-5

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT43

1	1	-1.0883	-1 +3 -4	\$CYLINDER OF URANYL NITRATE
2	0		-1 +4 -5	\$CYLINDER VOID
3	2	-2.7370	+1 -2 -5 +6 : -1 -3 +6	\$CYLINDER OF ALUMINUM
4	0		+2:+5:-6	\$ZERO IMPORTANCE OUTSIDE WORLD

1	cz	25.345
2	cz	25.665
3	pz	0.0
4	pz	+20.48
5	pz	+30.9
6	pz	-0.64

mode n

imp:n 1 1 1 0		
m1	92234.50c	1.68171-6
	92235.50c	1.52661-4
	92236.50c	7.08084-7
	92238.50c	8.69075-6
	7014.50c	3.94328-4
	8016.50c	3.41088-2
	1001.50c	6.52634-2
mt1	lwtr.01t	
m2	12000.51c	6.78153-4
	13027.50c	5.95056-2
	14000.50c	3.52126-4
	22000.51c	1.03277-5
	24000.50c	5.38898-5
	25055.51c	2.10015-5
	26000.50c	1.38721-4
	29000.50c	6.42881-5

kcode 1000 1.0 10 100

ksrc 0 0 5

print

ROT50

1	1	-1.0934	-1 +5 -6 u=1	\$CYLINDER OF URANYL NITRATE
2	0		-1 +6 -7 u=1	\$CYLINDER VOID
3	2	-2.737	+1 -2 +4 -7 : -1 +4 -5 u=1	\$CYLINDER OF ALUMINUM
4	0		-2 +7 -8 u=1	\$VOID
5	3	-7.9200	+2 -3 +4 -8 u=1	\$STAINLESS STEEL SLEEVE
6	0		+3:-4:+8 u=1	\$VOID
7	0		-9 +10 -11 +12 u=2 fill=1 lat=1	\$CELL FILLED WITH 1-6
8	0		-14 +15 -16 +17 -18 +19 fill=2	\$4X4X1 ARRAY
9	4	-2.3210	#8 -20 +21 -22 +23 +4 -13	\$CONCRETE REFLECTOR (SIDES)

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```

10 0      #8 -20 +21 -22 +23 +13 -18      $VOID
11 0      #8 -20 +21 -22 +23 -4 +19      $VOID
12 4 -2.3210 -20 +21 -22 +23 +18 -24      $CONCRETE REFLECTOR (TOP)
13 4 -2.3210 -20 +21 -22 +23 -19 +25      $CONCRETE REFLECTOR (BOTTOM)
14 0      +20:-21:+22:-23:+24:-25      $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 10.56
2  cz 10.96
3  cz 11.28
4  pz -0.32
5  pz 0.0
6  pz +28.63
7  pz +119.1
8  pz +121.68
9  px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 pz +122.28
14 px +106.7499
15 px -15.2499
16 py +106.7499
17 py -15.2499
18 pz +123.18
19 pz -1.22
20 px +132.45
21 px -40.95
22 py +132.45
23 py -40.95
24 pz +148.88
25 pz -26.92

```

```
mode n
```

```
imp:n 1 12r 0
```

```

m1 92234.50c 1.76928-6
    92235.50c 1.60610-4
    92236.50c 7.44955-7
    92238.50c 9.14329-6
    7014.50c 4.21618-4
    8016.50c 3.41572-2
    1001.50c 6.51727-2

```

```
mt1 lwtr.01t
```

```

m2 12000.51c 6.78153-4
    13027.51c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m4 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.51c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4

```

```
kcode 1000 1.0 10 100
```

```

ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0

```

```
print
```

```
ROT51
```

```

1 1 -1.1057 -1 +5 -6 u=1      $CYLINDER OF URANYL NITRATE
2 0          -1 +6 -7 u=1      $CYLINDER VOID
3 2 -2.737  +1 -2 +4 -7 : -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0          -2 +7 -8 u=1      $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1      $STAINLESS STEEL SLEEVE
6 0          +3:-4:+8 u=1      $VOID
7 0          -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0          -14 +15 -16 +17 -18 +19 fill=2 $2X2X1 ARRAY
9 0          (+14:-15:+16:-17) -26 +27 -28 +29 -18 +19 $SCUBOID VOID
10 4 -2.3210 (+26:-27:+28:-29) -20 +21 -22 +23 +4 -13 $CONCRETE REFLECTOR (SIDES)
11 0          (+26:-27:+28:-29) -20 +21 -22 +23 +13 -18 $VOID
12 0          (+26:-27:+28:-29) -20 +21 -22 +23 -4 +19 $VOID
13 4 -2.3210 -20 +21 -22 +23 +18 -24      $CONCRETE REFLECTOR (TOP)

```

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```

14 4 -2.3210 -20 +21 -22 +23 -19 +25 $CONCRETE REFLECTOR (BOTTOM)
15 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 cz 11.28
4 pz -0.32
5 pz 0.0
6 pz +60.7
7 pz +119.1
8 pz +121.68
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 pz +122.28
14 px +45.7499
15 px -15.2499
16 py +45.7499
17 py -15.2499
18 pz +123.18
19 pz -1.22
20 px +101.95
21 px -71.45
22 py +101.95
23 py -71.45
24 pz +148.88
25 pz -26.92
26 px +76.25
27 px -45.75
28 py +76.25
29 py -45.75

```

```

mode n
imp:n 1 13r 0
m1 92234.50c 2.00096-6
    92235.50c 1.81641-4
    92236.50c 8.42503-7
    92238.50c 1.03406-5
    7014.50c 4.72154-4
    8016.50c 3.42563-2
    1001.50c 6.49829-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m4 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print

```

```

ROT52
1 1 -1.1164 -1 +5 -6 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $4X4X1 ARRAY
9 4 -2.3210 #8 -20 +21 -22 +23 +4 -13 $CONCRETE REFLECTOR (SIDES)
10 0 #8 -20 +21 -22 +23 +13 -18 $VOID
11 0 #8 -20 +21 -22 +23 -4 +19 $VOID
12 4 -2.3210 -20 +21 -22 +23 +18 -24 $CONCRETE REFLECTOR (TOP)
13 4 -2.3210 -20 +21 -22 +23 -19 +25 $CONCRETE REFLECTOR (BOTTOM)
14 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 8.06
2  cz 8.38
3  cz 8.69
4  pz -0.32
5  pz 0.0
6  pz +57.34
7  pz +119.1
8  pz +121.68
9  px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 pz +122.28
14 px +106.7499
15 px -15.2499
16 py +106.7499
17 py -15.2499
18 pz +123.18
19 pz -1.22
20 px +132.45
21 px -40.95
22 py +132.45
23 py -40.95
24 pz +148.88
25 pz -26.92

```

mode n

imp:n 1 12r 0

```

m1  92234.50c  2.19556-6
    92235.50c  1.99306-4
    92236.50c  9.24440-7
    92238.50c  1.13462-5
    7014.50c   5.18479-4
    8016.50c   3.43500-2
    1001.50c   6.48249-2

```

mt1 lwtr.01t

```

m2  12000.51c  6.78153-4
    13027.50c  5.95056-2
    14000.50c  3.52126-4
    22000.51c  1.03277-5
    24000.50c  5.38898-5
    25055.51c  2.10015-5
    26000.50c  1.38721-4
    29000.50c  6.42881-5

```

m3 24000.50c 1.74286-2

```

    25055.51c  1.73633-3
    26000.50c  5.93579-2
    28000.50c  7.72074-3
    7014.50c   1.99630-5
    8016.50c   4.23724-2
    1001.50c   1.04019-2

```

m4 6012.50c 6.42959-3

```

    11023.50c  3.83034-4
    12000.51c  7.18850-4
    13027.50c  1.12412-3
    14000.50c  7.71398-3
    16032.51c  8.28261-5
    19000.51c  4.89721-4
    20000.51c  8.02089-3
    22000.51c  2.91932-5
    26000.50c  2.52793-4

```

kcode 1000 1.0 10 100

```

ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0

```

print

ROT53

```

1  1 -1.0934 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2  0 -1 +5 -6 u=1 $CYLINDER VOID
3  2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4  0 +2:-4:+6 u=1 $VOID
5  0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6  0 -12 +13 -14 +15 -16 +17 fill=2 $4X4X1 ARRAY
7  3 -2.3210 #6 -18 +19 -20 +21 +4 -11 $CONCRETE REFLECTOR (SIDES)
8  0 #6 -18 +19 -20 +21 +11 -16 $VOID
9  0 #6 -18 +19 -20 +21 -4 +17 $VOID
10 3 -2.3210 -18 +19 -20 +21 +16 -22 $CONCRETE REFLECTOR (TOP)
11 3 -2.3210 -18 +19 -20 +21 -17 +23 $CONCRETE REFLECTOR (BOTTOM)
12 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 10.56
2  cz 10.96
3  pz 0.0
4  pz -0.32
5  pz +27.15
6  pz +119.1

```

```

7  px +15.25
8  px -15.25
9  py +15.25
10 py -15.25
11 pz +122.28
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz +123.18
17 pz -1.22
18 px +132.45
19 px -40.95
20 py +132.45
21 py -40.95
22 pz +148.88
23 pz -26.92

```

```

mode n
imp:n 1 10r 0
m1 92234.50c 1.76928-6
    92235.50c 1.60610-4
    92236.50c 7.44955-7
    92238.50c 9.14329-6
    7014.50c 4.21618-4
    8016.50c 3.41572-2
    1001.50c 6.51727-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT54
1 1 -1.1057 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -16 +17 fill=2 $2X2X1 ARRAY
7 0 (+12:-13:+14:-15) -24 +25 -26 +27 -16 +17 $SCUBOID VOID
8 3 -2.3210 (+24:-25:+26:-27) -18 +19 -20 +21 +4 -11 $CONCRETE REFLECTOR (SIDES)
9 0 (+24:-25:+26:-27) -18 +19 -20 +21 +11 -16 $VOID
10 0 (+24:-25:+26:-27) -18 +19 -20 +21 -4 +17 $VOID
11 3 -2.3210 -18 +19 -20 +21 +16 -22 $CONCRETE REFLECTOR (TOP)
12 3 -2.3210 -18 +19 -20 +21 -17 +23 $CONCRETE REFLECTOR (BOTTOM)
13 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 10.56
2  cz 10.96
3  pz 0.0
4  pz -0.32
5  pz +62.34
6  pz +119.1
7  px +15.25
8  px -15.25
9  py +15.25
10 py -15.25
11 pz +122.28
12 px +45.7499
13 px -15.2499
14 py +45.7499
15 py -15.2499
16 pz +123.18
17 pz -1.22

```

```

18 px +101.95
19 px -71.45
20 py +101.95
21 py -71.45
22 pz +148.88
23 pz -26.92
24 px +76.25
25 px -45.75
26 py +76.25
27 py -45.75

```

mode n

imp:n 1 11r 0

```

m1 92234.50c 2.00096-6
    92235.50c 1.81641-4
    92236.50c 8.42503-7
    92238.50c 1.03406-5
    7014.50c 4.72154-4
    8016.50c 3.42563-2
    1001.50c 6.49829-2

```

mt1 lwtr.01t

```

m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4

```

kcode 1000 1.0 10 100

ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5

print

ROT55

```

1 1 -1.1122 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -16 +17 fill=2 $2X2X1 ARRAY
7 0 (+12:-13:+14:-15) -24 +25 -26 +27 -16 +17 $CUBOID VOID
8 3 -2.3210 (+24:-25:+26:-27) -18 +19 -20 +21 +4 -11 $CONCRETE REFLECTOR (SIDES)
9 0 (+24:-25:+26:-27) -18 +19 -20 +21 +11 -16 $VOID
10 0 (+24:-25:+26:-27) -18 +19 -20 +21 -4 +17 $VOID
11 3 -2.3210 -18 +19 -20 +21 +16 -22 $CONCRETE REFLECTOR (TOP)
12 3 -2.3210 -18 +19 -20 +21 -17 +23 $CONCRETE REFLECTOR (BOTTOM)
13 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 pz 0.0
4 pz -0.32
5 pz +57.88
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +122.28
12 px +45.7499
13 px -15.2499
14 py +45.7499
15 py -15.2499
16 pz +123.18
17 pz -1.22
18 px +101.95
19 px -71.45
20 py +101.95
21 py -71.45
22 pz +148.88
23 pz -26.92
24 px +76.25
25 px -45.75
26 py +76.25
27 py -45.75

```

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```

mode n
imp:n 1 11r 0
m1 92234.50c 2.12272-6
    92235.50c 1.92694-4
    92236.50c 8.93769-7
    92238.50c 1.09698-5
    7014.50c 4.99477-4
    8016.50c 3.43092-2
    1001.50c 6.48810-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print
ROT56
1 1 -1.1164 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -16 +17 fill=2 $4X4X1 ARRAY
7 3 -2.3210 #6 -18 +19 -20 +21 +4 -11 $CONCRETE REFLECTOR (SIDES)
8 0 #6 -18 +19 -20 +21 +11 -16 $VOID
9 0 #6 -18 +19 -20 +21 -4 +17 $VOID
10 3 -2.3210 -18 +19 -20 +21 +16 -22 $CONCRETE REFLECTOR (TOP)
11 3 -2.3210 -18 +19 -20 +21 -17 +23 $CONCRETE REFLECTOR (BOTTOM)
12 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

1 cz 8.06
2 cz 8.38
3 pz 0.0
4 pz -0.32
5 pz +51.21
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +122.28
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz +123.18
17 pz -1.22
18 px +132.45
19 px -40.95
20 py +132.45
21 py -40.95
22 pz +148.88
23 pz -26.92

```

```

mode n
imp:n 1 10r 0
m1 92234.50c 2.19556-6
    92235.50c 1.99306-4
    92236.50c 9.24440-7
    92238.50c 1.13462-5
    7014.50c 5.18479-4
    8016.50c 3.43500-2
    1001.50c 6.48249-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5

```

```

26000.50c 1.38721-4
29000.50c 6.42881-5
m3 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT57
1 1 -1.5120 -1 +5 -6 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $4X4X1 ARRAY
9 4 -2.3210 #8 -20 +21 -22 +23 +4 -13 $CONCRETE REFLECTOR (SIDES)
10 0 #8 -20 +21 -22 +23 +13 -18 $VOID
11 0 #8 -20 +21 -22 +23 -4 +19 $VOID
12 4 -2.3210 -20 +21 -22 +23 +18 -24 $CONCRETE REFLECTOR (TOP)
13 4 -2.3210 -20 +21 -22 +23 -19 +25 $CONCRETE REFLECTOR (BOTTOM)
14 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 cz 11.28
4 pz -0.32
5 pz 0.0
6 pz +17.24
7 pz +119.1
8 pz +121.68
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 pz +122.28
14 px +106.7499
15 px -15.2499
16 py +106.7499
17 py -15.2499
18 pz +123.18
19 pz -1.22
20 px +132.45
21 px -40.95
22 py +132.45
23 py -40.95
24 pz +148.88
25 pz -26.92

```

```

mode n
imp:n 1 12r 0
m1 92234.50c 9.72894-6
92235.50c 8.83164-4
92236.50c 4.09637-6
92238.50c 5.02772-5
7014.50c 2.25466-3
8016.50c 3.73810-2
1001.50c 5.78051-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.51c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m4 7014.50c 1.99630-5
8016.50c 4.23724-2

```

```

1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.51c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

ROT58
1 1 -1.5054 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2 -4 : +6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -16 +17 fill=2 $4X4X1 ARRAY
7 3 -2.3210 #6 -18 +19 -20 +21 +4 -11 $CONCRETE REFLECTOR (SIDES)
8 0 #6 -18 +19 -20 +21 +11 -16 $VOID
9 0 #6 -18 +19 -20 +21 -4 +17 $VOID
10 3 -2.3210 -18 +19 -20 +21 +16 -22 $CONCRETE REFLECTOR (TOP)
11 3 -2.3210 -18 +19 -20 +21 -17 +23 $CONCRETE REFLECTOR (BOTTOM)
12 0 +18 -19 +20 -21 +22 -23 $ZERO IMPORTANCE OUTSIDE WORLD

1 cz 10.56
2 cz 10.96
3 pz 0.0
4 pz -0.32
5 pz +17.13
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +122.28
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz +123.18
17 pz -1.22
18 px +132.45
19 px -40.95
20 py +132.45
21 py -40.95
22 pz +148.88
23 pz -26.92

mode n
imp:n 1 10r 0
m1 92234.50c 9.57510-6
    92235.50c 8.69199-4
    92236.50c 4.03159-6
    92238.50c 4.94822-5
    7014.50c 2.21627-3
    8016.50c 3.73700-2
    1001.50c 5.80649-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
    7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5

```

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```

61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROTS9
1 1 -1.4995 -1 +5 -6 u=1 SCYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 SCYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 SCYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $2X2X1 ARRAY
9 0 (+14:-15:+16:-17) -26 +27 -28 +29 -18 +19 $CUBOID VOID
10 4 -2.3210 (+26:-27:+28:-29) -20 +21 -22 +23 +4 -13 $CONCRETE REFLECTOR (SIDES)
11 0 (+26:-27:+28:-29) -20 +21 -22 +23 +13 -18 $VOID
12 0 (+26:-27:+28:-29) -20 +21 -22 +23 -4 +19 $VOID
13 4 -2.3210 -20 +21 -22 +23 +18 -24 $CONCRETE REFLECTOR (TOP)
14 4 -2.3210 -20 +21 -22 +23 -19 +25 $CONCRETE REFLECTOR (BOTTOM)
15 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 cz 11.28
4 pz -0.32
5 pz 0.0
6 pz +29.49
7 pz +119.1
8 pz +121.68
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 pz +122.28
14 px +45.7499
15 px -15.2499
16 py +45.7499
17 py -15.2499
18 pz +123.18
19 pz -1.22
20 px +101.95
21 px -71.45
22 py +101.95
23 py -71.45
24 pz +148.88
25 pz -26.92
26 px +76.25
27 px -45.75
28 py +76.25
29 py -45.75

```

```

mode n
imp:n 1 13r 0
m1 92234.50c 9.47675-6
92235.50c 8.60271-4
92236.50c 3.99018-6
92238.50c 4.89740-5
7014.50c 2.19772-3
8016.50c 3.73038-2
1001.50c 5.80827-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m4 7014.50c 1.99630-5
8016.50c 4.23724-2
1001.50c 1.04019-2
6012.50c 6.42959-3
11023.50c 3.83034-4
12000.51c 7.18850-4
13027.50c 1.12412-3
14000.50c 7.71398-3
16032.51c 8.28261-5
19000.51c 4.89721-4
20000.51c 8.02089-3
22000.51c 2.91932-5
26000.50c 2.52793-4
kcode 1000 1.0 10 100

```


ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print

ROT60

1	1	-1.5054	-1 +3 -5	u=1	\$CYLINDER OF URANYL NITRATE
2	0		-1 +5 -6	u=1	\$CYLINDER VOID
3	2	-2.737	+1 -2 +4 -6	: -1 -3 +4 u=1	\$CYLINDER OF ALUMINUM
4	0		+2:-4:+6	u=1	\$VOID
5	0		-7 +8 -9 +10	u=2 fill=1 lat=1	\$CELL FILLED WITH 1-6
6	0		-12 +13 -14 +15 -16 +17	fill=2	\$2X2X1 ARRAY
7	0		(+12:-13:+14:-15) -24 +25 -26 +27 -16 +17		\$CUBOID VOID
8	3	-2.3210	(+24:-25:+26:-27) -18 +19 -20 +21 +4 -11		\$CONCRETE REFLECTOR (SIDES)
9	0		(+24:-25:+26:-27) -18 +19 -20 +21 +11 -16		\$VOID
10	0		(+24:-25:+26:-27) -18 +19 -20 +21 -4 +17		\$VOID
11	3	-2.3210	-18 +19 -20 +21 +16 -22		\$CONCRETE REFLECTOR (TOP)
12	3	-2.3210	-18 +19 -20 +21 -17 +23		\$CONCRETE REFLECTOR (BOTTOM)
13	0		+18:-19:+20:-21:+22:-23		\$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 10.56
2 cz 10.96
3 pz 0.0
4 pz -0.32
5 pz +31.11
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +122.28
12 px +45.7499
13 px -15.2499
14 py +45.7499
15 py -15.2499
16 pz +123.18
17 pz -1.22
18 px +101.95
19 px -71.45
20 py +101.95
21 py -71.45
22 pz +148.88
23 pz -26.92
24 px +76.25
25 px -45.75
26 py +76.25
27 py -45.75

mode n

imp:n 1 11r 0

m1	92234.50c	9.57510-6
	92235.50c	8.69199-4
	92236.50c	4.03159-6
	92238.50c	4.94822-5
	7014.50c	2.21627-3
	8016.50c	3.73700-2
	1001.50c	5.80649-2

mt1

m2	12000.51c	6.78153-4
	13027.50c	5.95056-2
	14000.50c	3.52126-4
	22000.51c	1.03277-5
	24000.50c	5.38898-5
	25055.51c	2.10015-5
	26000.50c	1.38721-4
	29000.50c	6.42881-5
m3	7014.50c	1.99630-5
	8016.50c	4.23724-2
	1001.50c	1.04019-2
	6012.50c	6.42959-3
	11023.50c	3.83034-4
	12000.51c	7.18850-4
	13027.50c	1.12412-3
	14000.50c	7.71398-3
	16032.51c	8.28261-5
	19000.51c	4.89721-4
	20000.51c	8.02089-3
	22000.51c	2.91932-5
	26000.50c	2.52793-4

kcode 1000 1.0 10 100

ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print

ROT61

1	1	-1.4995	-1 +5 -6	u=1	\$CYLINDER OF URANYL NITRATE
2	0		-1 +6 -7	u=1	\$CYLINDER VOID
3	2	-2.737	+1 -2 +4 -7	: -1 +4 -5 u=1	\$CYLINDER OF ALUMINUM
4	0		-2 +7 -8	u=1	\$VOID
5	3	-7.9200	+2 -3 +4 -8	u=1	\$STAINLESS STEEL SLEEVE

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```

6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $4X4X1 ARRAY
9 4 -2.3210 #8 -20 +21 -22 +23 +4 -13 $CONCRETE REFLECTOR (SIDES)
10 0 #8 -20 +21 -22 +23 +13 -18 $VOID
11 0 #8 -20 +21 -22 +23 -4 +19 $VOID
12 4 -2.3210 -20 +21 -22 +23 +18 -24 $CONCRETE REFLECTOR (TOP)
13 4 -2.3210 -20 +21 -22 +23 -19 +25 $CONCRETE REFLECTOR (BOTTOM)
14 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 8.06
2 cz 8.38
3 cz 8.69
4 pz -0.32
5 pz 0.0
6 pz +32.32
7 pz +119.1
8 pz +121.68
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 pz +122.28
14 px +106.7499
15 px -15.2499
16 py +106.7499
17 py -15.2499
18 pz +123.18
19 pz -1.22
20 px +132.45
21 px -40.95
22 py +132.45
23 py -40.95
24 pz +148.88
25 pz -26.92

```

```

mode n
imp:n 1 12r 0
m1 92234.50c 9.47675-6
    92235.50c 8.60271-4
    92236.50c 3.99018-6
    92238.50c 4.89740-5
    7014.50c 2.19772-3
    8016.50c 3.73038-2
    1001.50c 5.80827-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m4 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
    61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
    91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT62
1 1 -1.4984 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -16 +17 fill=2 $4X4X1 ARRAY
7 3 -2.3210 #6 -18 +19 -20 +21 +4 -11 $CONCRETE REFLECTOR (SIDES)
8 0 #6 -18 +19 -20 +21 +11 -16 $VOID
9 0 #6 -18 +19 -20 +21 -4 +17 $VOID
10 3 -2.3210 -18 +19 -20 +21 +16 -22 $CONCRETE REFLECTOR (TOP)

```

```

11 3 -2.3210 -18 +19 -20 +21 -17 +23 $CONCRETE REFLECTOR (BOTTOM)
12 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 8.06
2  cz 8.38
3  pz 0.0
4  pz -0.32
5  pz +31.82
6  pz +119.1
7  px +15.25
8  px -15.25
9  py +15.25
10 py -15.25
11 pz +122.28
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz +123.18
17 pz -1.22
18 px +132.45
19 px -40.95
20 py +132.45
21 py -40.95
22 pz +148.88
23 pz -26.92

```

```

mode n
imp:n 1 10r 0
m1 92234.50c 9.45519-6
    92235.50c 8.58313-4
    92236.50c 3.98110-6
    92238.50c 4.88625-5
    7014.50c 2.18930-3
    8016.50c 3.72979-2
    1001.50c 5.81256-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT63
1 1 -1.4984 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -16 +17 fill=2 $2X4X1 ARRAY
7 0 (+12:-13:+14:-15) -24 +8 -25 +10 -16 +17 $CUBOID VOID
8 3 -2.3210 (+24:-8:+25:-10) -18 +19 -20 +21 +4 -11 $CONCRETE REFLECTOR (SIDES)
9 0 (+24:-8:+25:-10) -18 +19 -20 +21 +11 -16 $VOID
10 0 (+24:-8:+25:-10) -18 +19 -20 +21 -4 +17 $VOID
11 3 -2.3210 -18 +19 -20 +21 +16 -22 $CONCRETE REFLECTOR (TOP)
12 3 -2.3210 -18 +19 -20 +21 -17 +23 $CONCRETE REFLECTOR (BOTTOM)
13 0 +18:-19:+20:-21:+22:-23 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 8.06
2  cz 8.38
3  pz 0.0
4  pz -0.32
5  pz +51.45
6  pz +119.1
7  px +15.25
8  px -15.25

```

9 py +15.25
 10 py -15.25
 11 pz +122.28
 12 px +45.7499
 13 px -15.2499
 14 py +106.7499
 15 py -15.2499
 16 pz +123.18
 17 pz -1.22
 18 px +132.45
 19 px -40.95
 20 py +132.45
 21 py -40.95
 22 pz +148.88
 23 pz -26.92
 24 px +106.75
 25 py +106.75

mode n

imp:n 1 11r 0

m1 92234.50c 9.45519-6
 92235.50c 8.58313-4
 92236.50c 3.98110-6
 92238.50c 4.88625-5
 7014.50c 2.18930-3
 8016.50c 3.72979-2
 1001.50c 5.81256-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5
 m3 7014.50c 1.99630-5
 8016.50c 4.23724-2
 1001.50c 1.04019-2
 6012.50c 6.42959-3
 11023.50c 3.83034-4
 12000.51c 7.18850-4
 13027.50c 1.12412-3
 14000.50c 7.71398-3
 16032.51c 8.28261-5
 19000.51c 4.89721-4
 20000.51c 8.02089-3
 22000.51c 2.91932-5
 26000.50c 2.52793-4

kcode 1000 1.0 10 100

ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5 0 61.0 5 30.5 61.0 5

0 91.5 5 30.5 91.5 5

print

ROT64

1 1 -1.4984 -1 +3 -5 u=1
 2 0 -1 +5 -6 u=1
 3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1
 4 0 +2:-4:+6 u=1
 5 0 -7 +8 -9 +10 u=2 fill=1 lat=1
 6 0 -12 +13 -14 +15 -16 +17 fill=2
 7 0 (+12:-13:+14:-15) -24 +8 -25 +26 -16 +17
 8 3 -2.3210 (+24:-8:+25:-26) -18 +19 -20 +21 +4 -11
 9 0 (+24:-8:+25:-26) -18 +19 -20 +21 +11 -16
 10 0 (+24:-8:+25:-26) -18 +19 -20 +21 -4 +17
 11 3 -2.3210 -18 +19 -20 +21 +16 -22
 12 3 -2.3210 -18 +19 -20 +21 -17 +23
 13 0 +18:-19:+20:-21:+22:-23

\$CYLINDER OF URANYL NITRATE
 \$CYLINDER VOID
 \$CYLINDER OF ALUMINUM
 \$VOID
 \$CELL FILLED WITH 1-6
 \$2X3X1 ARRAY
 \$CUBOID VOID
 \$CONCRETE REFLECTOR (SIDES)
 \$VOID
 \$VOID
 \$CONCRETE REFLECTOR (TOP)
 \$CONCRETE REFLECTOR (BOTTOM)
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 8.06
 2 cz 8.38
 3 pz 0.0
 4 pz -0.32
 5 pz +65.49
 6 pz +119.1
 7 px +15.25
 8 px -15.25
 9 py +15.25
 10 py -15.25
 11 pz +122.28
 12 px +45.7499
 13 px -15.2499
 14 py +76.2499
 15 py -15.2499
 16 pz +123.18
 17 pz -1.22
 18 px +132.45

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19 px -40.95
 20 py +101.95
 21 py -71.45
 22 pz +148.88
 23 pz -26.92
 24 px +106.75
 25 py +76.25
 26 py -45.75

mode n
 imp:n 1 11r 0
 m1 92234.50c 9.45519-6
 92235.50c 8.58313-4
 92236.50c 3.98110-6
 92238.50c 4.88625-5
 7014.50c 2.18930-3
 8016.50c 3.72979-2
 1001.50c 5.81256-2
 mt1 lwtr.01t
 m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5
 m3 7014.50c 1.99630-5
 8016.50c 4.23724-2
 1001.50c 1.04019-2
 6012.50c 6.42959-3
 11023.50c 3.83034-4
 12000.51c 7.18850-4
 13027.50c 1.12412-3
 14000.50c 7.71398-3
 16032.51c 8.28261-5
 19000.51c 4.89721-4
 20000.51c 8.02089-3
 22000.51c 2.91932-5
 26000.50c 2.52793-4
 kcode 1000 1.0 10 100
 ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
 0 61.0 5 30.5 61.0 5
 print

ROT65
 1 1 -1.4984 -1 +5 -6 u=1 \$CYLINDER OF URANYL NITRATE
 2 0 -1 +6 -7 u=1 \$CYLINDER VOID
 3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 \$CYLINDER OF ALUMINUM
 4 0 -2 +7 -8 u=1 \$VOID
 5 3 -7.9200 +2 -3 +4 -8 u=1 \$STAINLESS STEEL SLEEVE
 6 0 +3:-4:+8 u=1 \$VOID
 7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 \$CELL FILLED WITH 1-6
 8 0 -14 +15 -16 +17 -18 +19 fill=2 \$2X2X1 ARRAY
 9 0 (+14:-15:+16:-17) -26 +10 -27 +28 -18 +19 \$CUBOID VOID
 10 4 -2.3210 (+26:-10:+27:-28) -20 +21 -22 +23 +4 -13 \$CONCRETE REFLECTOR (SIDES)
 11 0 (+26:-10:+27:-28) -20 +21 -22 +23 +13 -18 \$VOID
 12 0 (+26:-10:+27:-28) -20 +21 -22 +23 -4 +19 \$VOID
 13 4 -2.3210 -20 +21 -22 +23 +18 -24 \$CONCRETE REFLECTOR (TOP)
 14 4 -2.3210 -20 +21 -22 +23 -19 +25 \$CONCRETE REFLECTOR (BOTTOM)
 15 0 +20:-21:+22:-23:+24:-25 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 8.06
 2 cz 8.38
 3 cz 8.69
 4 pz -0.32
 5 pz 0.0
 6 pz +101.45
 7 pz +119.1
 8 pz +121.68
 9 px +15.25
 10 px -15.25
 11 py +15.25
 12 py -15.25
 13 pz +122.28
 14 px +45.7499
 15 px -15.2499
 16 py +45.7499
 17 py -15.2499
 18 pz +123.18
 19 pz -1.22
 20 px +132.45
 21 px -40.95
 22 py +71.45
 23 py -101.95
 24 pz +148.88
 25 pz -26.92

26 px +106.75
 27 py +45.75
 28 pz -76.25

mode n

imp:n 1 13r 0

m1 92234.50c 9.45519-6
 92235.50c 8.58313-4
 92236.50c 3.98110-6
 92238.50c 4.88625-5
 7014.50c 2.18930-3
 8016.50c 3.72979-2
 1001.50c 5.81256-2

mt1 lwtr.01t

m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5

m3 24000.50c 1.74286-2
 25055.51c 1.73633-3
 26000.50c 5.93579-2
 28000.50c 7.72074-3

m4 7014.50c 1.99630-5
 8016.50c 4.23724-2
 1001.50c 1.04019-2
 6012.50c 6.42959-3
 11023.50c 3.83034-4
 12000.51c 7.18850-4
 13027.50c 1.12412-3
 14000.50c 7.71398-3
 16032.51c 8.28261-5
 19000.51c 4.89721-4
 20000.51c 8.02089-3
 22000.51c 2.91932-5
 26000.50c 2.52793-4

kcode 1000 1.0 10 100

ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5

print

ROT66

1 1 -1.4984 -1 +3 -5 u=1
 2 0 -1 +5 -6 u=1
 3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1
 4 0 +2:-4:+6 u=1
 5 0 -7 +8 -9 +10 u=2 fill=1 lat=1
 6 0 -12 +13 -14 +15 -16 +17 fill=2
 7 0 (+12:-13:+14:-15) -24 +8 -25 +26 -16 +17
 8 3 -2.3210 (+24:-8:+25:-26) -18 +19 -20 +21 +4 -11
 9 0 (+24:-8:+25:-26) -18 +19 -20 +21 +11 -16
 10 0 (+24:-8:+25:-26) -18 +19 -20 +21 -4 +17
 11 3 -2.3210 -18 +19 -20 +21 +16 -22
 12 3 -2.3210 -18 +19 -20 +21 -17 +23
 13 0 +18:-19:+20:-21:+22:-23

\$CYLINDER OF URANYL NITRATE
 \$CYLINDER VOID
 \$CYLINDER OF ALUMINUM
 \$VOID
 \$CELL FILLED WITH 1-6
 \$2X2X1 ARRAY
 \$CUBOID VOID
 \$CONCRETE REFLECTOR (SIDES)
 \$VOID
 \$VOID
 \$CONCRETE REFLECTOR (TOP)
 \$CONCRETE REFLECTOR (BOTTOM)
 \$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 8.06
 2 cz 8.38
 3 pz 0.0
 4 pz -0.32
 5 pz +104.04
 6 pz +119.1
 7 px +15.25
 8 px -15.25
 9 py +15.25
 10 py -15.25
 11 pz +122.28
 12 px +45.7499
 13 px -15.2499
 14 py +45.7499
 15 py -15.2499
 16 pz +123.18
 17 pz -1.22
 18 px +132.45
 19 px -40.95
 20 py +71.45
 21 py -101.95
 22 pz +148.88
 23 pz -26.92
 24 px +106.75
 25 py +45.75
 26 pz -76.25

mode n

imp:n 1 11r 0

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```

m1 92234.50c 9.45519-6
    92235.50c 8.58313-4
    92236.50c 3.98110-6
    92238.50c 4.88625-5
    7014.50c 2.18930-3
    8016.50c 3.72979-2
    1001.50c 5.81256-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 7014.50c 1.99630-5
    8016.50c 4.23724-2
    1001.50c 1.04019-2
    6012.50c 6.42959-3
    11023.50c 3.83034-4
    12000.51c 7.18850-4
    13027.50c 1.12412-3
    14000.50c 7.71398-3
    16032.51c 8.28261-5
    19000.51c 4.89721-4
    20000.51c 8.02089-3
    22000.51c 2.91932-5
    26000.50c 2.52793-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print

```

ROT67 BROMINE LEFT OUT OF PLEXIGLASS (M5)

```

1 1 -1.0837 -1 +5 -6 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -13 +14 -15 +16 -17 +18 fill=2 $4X4X1 ARRAY
9 4 -1.1800 (+13:-14:+15:-16) -19 +20 -21 +22 -17 +18 $PLEXIGLASS REFLECTOR (SIDES)
10 5 -1.286 -19 +20 -21 +22 +17 -23 $PLEXIGLASS REFLECTOR (TOP)
11 5 -1.286 -19 +20 -21 +22 -18 +24 $PLEXIGLASS REFLECTOR (BOTTOM)
12 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 cz 11.28
4 pz -0.3201
5 pz 0.0
6 pz +34.82
7 pz +119.1
8 pz +121.6801
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 px +106.7499
14 px -15.2499
15 py +106.7499
16 py -15.2499
17 pz +121.68
18 pz -.32
19 px +127.55
20 px -36.05
21 py +127.55
22 py -36.05
23 pz +141.88
24 pz -21.12

```

mode n

imp:n 1 10r 0

```

m1 92234.50c 1.58625-6
    92235.50c 1.43995-4
    92236.50c 6.67891-7
    92238.50c 8.19743-6
    7014.50c 3.76944-4
    8016.50c 3.40819-2
    1001.50c 6.53523-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5

```

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```

25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m4 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m5 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT68 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.0837 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -11 +16 fill=2 $4X4X1 ARRAY
7 3 -1.1800 (+12:-13:+14:-15) -17 +18 -19 +20 -11 +16 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -17 +18 -19 +20 +11 -21 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -17 +18 -19 +20 -16 +22 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +17:-18:+19:-20:+21:-22 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 pz 0.0
4 pz -0.3201
5 pz +31.76
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +121.68
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz - .32
17 px +127.55
18 px -36.05
19 py +127.55
20 py -36.05
21 pz +141.88
22 pz -21.12

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 1.58625-6
92235.50c 1.43995-4
92236.50c 6.67891-7
92238.50c 8.19743-6
7014.50c 3.76944-4
8016.50c 3.40819-2
1001.50c 6.53523-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5

```


print 91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0

ROT69 BROMINE LEFT OF OUT PLEXIGLASS (M5)

1	1	-1.0837	-1 +5 -6	u=1	\$CYLINDER OF URANYL NITRATE
2	0		-1 +6 -7	u=1	\$CYLINDER VOID
3	2	-2.737	+1 -2 +4 -7	-1 +4 -5 u=1	\$CYLINDER OF ALUMINUM
4	0		-2 +7 -8	u=1	\$VOID
5	3	-7.9200	+2 -3 +4 -8	u=1	\$STAINLESS STEEL SLEEVE
6	0		+3 -4 +8	u=1	\$VOID
7	0		-9 +10 -11 +12	u=2 fill=1 lat=1	\$CELL FILLED WITH 1-6
8	0		-13 +14 -15 +16 -17 +18	fill=2	\$2X2X1 ARRAY
9	0		(+13:-14:+15:-16) -19 +20 -21 +22 -17 +18		\$SCUBOID VOID
10	4	-1.1800	(+19:-20:+21:-22) -23 +24 -25 +26 -17 +18		\$PLEXIGLASS REFLECTOR (SIDES)
11	5	-1.286	-23 +24 -25 +26 +17 -27		\$PLEXIGLASS REFLECTOR (TOP)
12	5	-1.286	-23 +24 -25 +26 -18 +28		\$PLEXIGLASS REFLECTOR (BOTTOM)
13	0		+23:-24:+25:-26:+27:-28		\$ZERO IMPORTANCE OUTSIDE WORLD

1 cz 10.56
 2 cz 10.96
 3 cz 11.28
 4 pz -0.3201
 5 pz 0.0
 6 pz +110.2
 7 pz +119.1
 8 pz +121.6801
 9 px +15.25
 10 px -15.25
 11 py +15.25
 12 py -15.25
 13 px +45.7499
 14 px -15.2499
 15 py +45.7499
 16 py -15.2499
 17 pz +121.68
 18 pz -32
 19 px +76.25
 20 px -45.75
 21 py +76.25
 22 py -45.75
 23 px +97.05
 24 px -66.55
 25 py +97.05
 26 py -66.55
 27 pz +141.88
 28 pz -21.12

mode n

imp:n 1 11r 0
 m1 92234.50c 1.58625-6
 92235.50c 1.43995-4
 92236.50c 6.67891-7
 92238.50c 8.19743-6
 7014.50c 3.76944-4
 8016.50c 3.40819-2
 1001.50c 6.53523-2

mt1 lwtr.01t
 m2 12000.51c 6.78153-4
 13027.50c 5.95056-2
 14000.50c 3.52126-4
 22000.51c 1.03277-5
 24000.50c 5.38898-5
 25055.51c 2.10015-5
 26000.50c 1.38721-4
 29000.50c 6.42881-5
 m3 24000.50c 1.74286-2
 25055.51c 1.73633-3
 26000.50c 5.93579-2
 28000.50c 7.72074-3
 m4 8016.50c 1.42047-2
 1001.50c 5.68187-2
 6012.50c 3.55117-2
 m5 7014.50c 5.5290-5
 8016.50c 1.4231-2
 1001.50c 5.5166-2
 6012.50c 3.3966-2
 15031.51c 3.8504-4
 17000.50c 3.5605-4

kcode 1000 1.0 10 100

ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5

print

ROT70 BROMINE LEFT OUT OF PLEXIGLASS (M4)

1	1	-1.0837	-1 +3 -5	u=1	\$CYLINDER OF URANYL NITRATE
2	0		-1 +5 -6	u=1	\$CYLINDER VOID
3	2	-2.737	+1 -2 +4 -6	-1 -3 +4 u=1	\$CYLINDER OF ALUMINUM
4	0		+2:-4:+6	u=1	\$VOID
5	0		-7 +8 -9 +10	u=2 fill=1 lat=1	\$CELL FILLED WITH 1-6

```

6 0 -12 +13 -14 +15 -11 +16 fill=2 $2X2X1 ARRAY
7 0 (+12:-13:+14:-15) -17 +18 -19 +20 -11 +16 $CUBOID VOID
8 3 -1.1800 (+17:-18:+19:-20) -21 +22 -23 +24 -11 +16 $PLEXIGLASS REFLECTOR (SIDES)
9 4 -1.286 -21 +22 -23 +24 +11 -25 $PLEXIGLASS REFLECTOR (TOP)
10 4 -1.286 -21 +22 -23 +24 -16 +26 $PLEXIGLASS REFLECTOR (BOTTOM)
11 0 +21:-22:+23:-24:+25:-26 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 pz 0.0
4 pz -0.3201
5 pz +102.29
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +121.68
12 px +45.7499
13 px -15.2499
14 py +45.7499
15 py -15.2499
16 pz -.32
17 px +76.25
18 px -45.75
19 py +76.25
20 py -45.75
21 px +97.05
22 px -66.55
23 py +97.05
24 py -66.55
25 pz +141.88
26 pz -21.12

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 1.58625-6
    92235.50c 1.43995-4
    92236.50c 6.67891-7
    92238.50c 8.19743-6
    7014.50c 3.76944-4
    8016.50c 3.40819-2
    1001.50c 6.53523-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 9.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print

```

```

ROT71 BROMINE LEFT OUT OF PLEXIGLASS (M5)
1 1 -1.0837 -1 +5 -6 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -13 +14 -15 +16 -17 +18 fill=2 $4X4X1 ARRAY
9 4 -1.1800 (+13:-14:+15:-16) -19 +20 -21 +22 -17 +18 $PLEXIGLASS REFLECTOR (SIDES)
10 5 -1.286 -19 +20 -21 +22 +17 -23 $PLEXIGLASS REFLECTOR (TOP)
11 5 -1.286 -19 +20 -21 +22 -18 +24 $PLEXIGLASS REFLECTOR (BOTTOM)
12 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 8.06
2 cz 8.38
3 cz 8.69
4 pz -0.3201
5 pz 0.0
6 pz +105.85
7 pz +119.1
8 pz +121.6801
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25

```

```

13 px +106.7499
14 px -15.2499
15 py +106.7499
16 py -15.2499
17 pz +121.68
18 pz -.32
19 px +127.55
20 px -36.05
21 py +127.55
22 py -36.05
23 pz +141.88
24 pz -21.12

```

mode n

imp:n 1 10r 0

```

m1 92234.50c 1.58625-6
    92235.50c 1.43995-4
    92236.50c 6.67891-7
    92238.50c 8.19743-6
    7014.50c 3.76944-4
    8016.50c 3.40819-2
    1001.50c 6.53523-2

```

mt1 lwtr.01t

```

m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5

```

```

m3 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3

```

```

m4 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2

```

```

m5 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4

```

kcode 1000 1.0 10 100

```

ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0

```

print

ROT72 BROMINE LEFT OUT OF PLEXIGLASS (M4)

```

1 1 -1.0837 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -11 +16 fill=2 $4X4X1 ARRAY
7 3 -1.1800 (+12:-13:+14:-15) -17 +18 -19 +20 -11 +16 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -17 +18 -19 +20 +11 -21 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -17 +18 -19 +20 -16 +22 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +17:-18:+19:-20:+21:-22 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 8.06
2 cz 8.38
3 pz 0.0
4 pz -0.3201
5 pz +78.40
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +121.68
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz -.32
17 px +127.55
18 px -36.05
19 py +127.55
20 py -36.05
21 pz +141.88
22 pz -21.12

```

mode n

imp:n 1 8r 0

m1 92234.50c 1.58625-6

```

92235.50c 1.43995-4
92236.50c 6.67891-7
92238.50c 8.19743-6
7014.50c 3.76944-4
8016.50c 3.40819-2
1001.50c 6.53523-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT73 BROMINE LEFT OUT OF PLEXIGLASS (M5)
1 1 -1.4925 -1 +5 -6 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 ; -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3;-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -13 +14 -15 +16 -17 +18 fill=2 $4X4X1 ARRAY
9 4 -1.1800 (+13:-14:+15:-16) -19 +20 -21 +22 -17 +18 $PLEXIGLASS REFLECTOR (SIDES)
10 5 -1.286 -19 +20 -21 +22 +17 -23 $PLEXIGLASS REFLECTOR (TOP)
11 5 -1.286 -19 +20 -21 +22 -18 +24 $PLEXIGLASS REFLECTOR (BOTTOM)
12 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 cz 11.28
4 pz -0.3201
5 pz 0.0
6 pz +19.27
7 pz +119.1
8 pz +121.6801
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 px +106.7499
14 px -15.2499
15 py +106.7499
16 py -15.2499
17 pz +121.68
18 pz -.32
19 px +127.55
20 px -36.05
21 py +127.55
22 py -36.05
23 pz +141.88
24 pz -21.12

```

```

mode n
imp:n 1 10r 0
m1 92234.50c 9.36025-6
92235.50c 8.49695-4
92236.50c 3.94113-6
92238.50c 4.83719-5
7014.50c 2.12023-3
8016.50c 3.72526-2
1001.50c 5.84358-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 24000.50c 1.74286-2

```

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```

25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m4 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m5 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT74 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.4925 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -11 +16 fill=2 $4X4X1 ARRAY
7 3 -1.1800 (+12:-13:+14:-15) -17 +18 -19 +20 -11 +16 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -17 +18 -19 +20 +11 -21 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -17 +18 -19 +20 -16 +22 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +17:-18:+19:-20:+21:-22 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 pz 0.0
4 pz -0.3201
5 pz +18.82
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +121.68
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz -.32
17 px +127.55
18 px -36.05
19 py +127.55
20 py -36.05
21 pz +141.88
22 pz -21.12

```

```

mode n
imp:n 1 Br 0
m1 92234.50c 9.36025-6
    92235.50c 8.49695-4
    92236.50c 3.94113-6
    92238.50c 4.83719-5
    7014.50c 2.12023-3
    8016.50c 3.72526-2
    1001.50c 5.84358-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT75 BROMINE LEFT OUT OF PLEXIGLASS (M5)

```

1	1	-1.4925	-1 +5 -6	u=1	SCYLINDER OF URANYL NITRATE
2	0		-1 +6 -7	u=1	SCYLINDER VOID
3	2	-2.737	+1 -2 +4 -7	-1 +4 -5 u=1	SCYLINDER OF ALUMINUM
4	0		-2 +7 -8	u=1	VOID
5	3	-7.9200	+2 -3 +4 -8	u=1	STAINLESS STEEL SLEEVE
6	0		+3:-4:+8	u=1	VOID
7	0		-9 +10 -11 +12	u=2 fill=1 lat=1	CELL FILLED WITH 1-6
8	0		-13 +14 -15 +16 -17 +18	fill=2	2X2X1 ARRAY
9	0		(+13:-14:+15:-16) -19 +20 -21 +22 -17 +18		SCUBOID VOID
10	4	-1.1800	(+19:-20:+21:-22) -23 +24 -25 +26 -17 +18		PLEXIGLASS REFLECTOR (SIDES)
11	5	-1.286	-23 +24 -25 +26 +17 -27		PLEXIGLASS REFLECTOR (TOP)
12	5	-1.286	-23 +24 -25 +26 -18 +28		PLEXIGLASS REFLECTOR (BOTTOM)
13	0		+23:-24:+25:-26:+27:-28		ZERO IMPORTANCE OUTSIDE WORLD

```

1  cz 10.56
2  cz 10.96
3  cz 11.28
4  pz -0.3201
5  pz 0.0
6  pz +31.93
7  pz +119.1
8  pz +121.6801
9  px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 px +45.7499
14 px -15.2499
15 py +45.7499
16 py -15.2499
17 pz +121.68
18 pz -.32
19 px +76.25
20 px -45.75
21 py +76.25
22 py -45.75
23 px +97.05
24 px -66.55
25 py +97.05
26 py -66.55
27 pz +141.88
28 pz -21.12

```

```

mode n
imp:n 1 11r 0
m1 92234.50c 9.36025-6
    92235.50c 8.49695-4
    92236.50c 3.94113-6
    92238.50c 4.83719-5
    7014.50c 2.12023-3
    8016.50c 3.72526-2
    1001.50c 5.84358-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
    24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m4 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m5 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print

```

ROT76 BROMINE LEFT OUT OF PLEXIGLASS (M4)

1	1	-1.4925	-1 +3 -5	u=1	SCYLINDER OF URANYL NITRATE
2	0		-1 +5 -6	u=1	SCYLINDER VOID
3	2	-2.737	+1 -2 +4 -6	-1 -3 +4 u=1	SCYLINDER OF ALUMINUM
4	0		+2:-4:+6	u=1	VOID
5	0		-7 +8 -9 +10	u=2 fill=1 lat=1	CELL FILLED WITH 1-6
6	0		-12 +13 -14 +15 -11 +16	fill=2	2X2X1 ARRAY
7	0		(+12:-13:+14:-15) -17 +18 -19 +20 -11 +16		SCUBOID VOID

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```

8 3 -1.1800 (+17:-18:+19:-20) -21 +22 -23 +24 -11 +16 $PLEXIGLASS REFLECTOR (SIDES)
9 4 -1.286 -21 +22 -23 +24 +11 -25 $PLEXIGLASS REFLECTOR (TOP)
10 4 -1.286 -21 +22 -23 +24 -16 +26 $PLEXIGLASS REFLECTOR (BOTTOM)
11 0 +21:-22:+23:-24:+25:-26 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 10.56
2 cz 10.96
3 pz 0.0
4 pz -0.3201
5 pz +33.20
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +121.68
12 px +45.7499
13 px -15.2499
14 py +45.7499
15 py -15.2499
16 pz -.32
17 px +76.25
18 px -45.75
19 py +76.25
20 py -45.75
21 px +97.05
22 px -66.55
23 py +97.05
24 py -66.55
25 pz +141.88
26 pz -21.12

```

```

mode n
imp:n 1 9r 0
m1 92234.50c 9.36025-6
    92235.50c 8.49695-4
    92236.50c 3.94113-6
    92238.50c 4.83719-5
    7014.50c 2.12023-3
    8016.50c 3.72526-2
    1001.50c 5.84358-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m4 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 0 30.5 5 30.5 30.5 5
print

```

```

ROT77 BROMINE LEFT OUT OF PLEXIGLASS (M5)
1 1 -1.4925 -1 +5 -6 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -13 +14 -15 +16 -17 +18 fill=2 $4X4X1 ARRAY
9 4 -1.1800 (+13:-14:+15:-16) -19 +20 -21 +22 -17 +18 $PLEXIGLASS REFLECTOR (SIDES)
10 5 -1.286 -19 +20 -21 +22 +17 -23 $PLEXIGLASS REFLECTOR (TOP)
11 5 -1.286 -19 +20 -21 +22 -18 +24 $PLEXIGLASS REFLECTOR (BOTTOM)
12 0 +19:-20:+21:-22:+23:-24 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 8.06
2 cz 8.38
3 cz 8.69
4 pz -0.3201
5 pz 0.0
6 pz +38.10
7 pz +119.1
8 pz +121.6801
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 px +106.7499

```

```

14 px -15.2499
15 py +106.7499
16 pz -15.2499
17 pz +121.68
18 pz -.32
19 px +127.55
20 px -36.05
21 py +127.55
22 py -36.05
23 pz +141.88
24 pz -21.12

mode n
imp:n 1 10r 0
m1 92234.50c 9.36025-6
    92235.50c 8.49695-4
    92236.50c 3.94113-6
    92238.50c 4.83719-5
    7014.50c 2.12023-3
    8016.50c 3.72526-2
    1001.50c 5.84358-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
    13027.50c 5.95056-2
    14000.50c 3.52126-4
    22000.51c 1.03277-5
    24000.50c 5.38898-5
    25055.51c 2.10015-5
    26000.50c 1.38721-4
    29000.50c 6.42881-5
m3 24000.50c 1.74286-2
    25055.51c 1.73633-3
    26000.50c 5.93579-2
    28000.50c 7.72074-3
m4 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m5 7014.50c 5.5290-5
    8016.50c 1.4231-2
    1001.50c 5.5166-2
    6012.50c 3.3966-2
    15031.51c 3.8504-4
    17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
      61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
      91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

```

ROT78 BROMINE LEFT OUT OF PLEXIGLASS (M4)
1 1 -1.4925 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1 $CYLINDER OF ALUMINUM
4 0 +2:-4:+6 u=1 $VOID
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
6 0 -12 +13 -14 +15 -11 +16 fill=2 $4X4X1 ARRAY
7 3 -1.1800 (+12:-13:+14:-15) -17 +18 -19 +20 -11 +16 $PLEXIGLASS REFLECTOR (SIDES)
8 4 -1.286 -17 +18 -19 +20 +11 -21 $PLEXIGLASS REFLECTOR (TOP)
9 4 -1.286 -17 +18 -19 +20 -16 +22 $PLEXIGLASS REFLECTOR (BOTTOM)
10 0 +17:-18:+19:-20:+21:-22 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 8.06
2 cz 8.38
3 pz 0.0
4 pz -0.3201
5 pz +35.56
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +121.68
12 px +106.7499
13 px -15.2499
14 py +106.7499
15 py -15.2499
16 pz -.32
17 px +127.55
18 px -36.05
19 py +127.55
20 py -36.05
21 pz +141.88
22 pz -21.12

```

```

mode n
imp:n 1 8r 0
m1 92234.50c 9.36025-6

```



```

92235.50c 8.49695-4
92236.50c 3.94113-6
92238.50c 4.83719-5
7014.50c 2.12023-3
8016.50c 3.72526-2
1001.50c 5.84358-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 91.5 0 5 0 30.5 5 30.5 30.5 5
61.0 30.5 5 91.5 30.5 5 0 61.0 5 30.5 61.0 5 61.0 61.0 5
91.5 61.0 5 0 91.5 5 30.5 91.5 5 61.0 91.5 5 91.5 91.5 0
print

```

ROT79 BROMINE LEFT OUT OF PLEXIGLASS (M5)

```

1 1 -1.4925 -1 +5 -6 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +6 -7 u=1 $CYLINDER VOID
3 2 -2.737 +1 -2 +4 -7 : -1 +4 -5 u=1 $CYLINDER OF ALUMINUM
4 0 -2 +7 -8 u=1 $VOID
5 3 -7.9200 +2 -3 +4 -8 u=1 $STAINLESS STEEL SLEEVE
6 0 +3:-4:+8 u=1 $VOID
7 0 -9 +10 -11 +12 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -13 +14 -15 +16 -17 +18 fill=2 $3X2X1 ARRAY
9 0 (+13:-14:+15:-16) -19 +10 -20 +21 -17 +18 $CUBOID VOID
10 4 -1.1800 (+19:-10:20:-21) -22 +23 -24 +25 -17 +18 $PLEXIGLASS REFLECTOR (SIDES)
11 5 -1.286 -22 +23 -24 +25 +17 -26 $PLEXIGLASS REFLECTOR (TOP)
12 5 -1.286 -22 +23 -24 +25 -18 +27 $PLEXIGLASS REFLECTOR (BOTTOM)
13 0 +22:-23:+24:-25:+26:-27 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 8.06
2 cz 8.38
3 cz 8.69
4 pz -0.3201
5 pz 0.0
6 pz +95.2
7 pz +119.1
8 pz +121.6801
9 px +15.25
10 px -15.25
11 py +15.25
12 py -15.25
13 px +76.2499
14 px -15.2499
15 py +45.7499
16 py -15.2499
17 pz +121.68
18 pz -.32
19 px +106.75
20 py +76.25
21 py -45.75
22 px +127.55
23 px -36.05
24 py +97.05
25 py -66.55
26 pz +141.88
27 pz -21.12

```

```

mode n
imp:n 1 11r 0
m1 92234.50c 9.36025-6
92235.50c 8.49695-4
92236.50c 3.94113-6
92238.50c 4.83719-5
7014.50c 2.12023-3
8016.50c 3.72526-2
1001.50c 5.84358-2
mt1 lwtr.01t
m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5

```

```

25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5
m3 24000.50c 1.74286-2
25055.51c 1.73633-3
26000.50c 5.93579-2
28000.50c 7.72074-3
m4 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m5 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4
kcode 1000 1.0 10 100
ksrc 0 0 5 30.5 0 5 61.0 0 5 0 30.5 5 30.5 30.5 5
61.0 30.5 5
print

```

ROT80 BROMINE LEFT OUT OF PLEXIGLASS (M4)

```

1 1 -1.4925 -1 +3 -5 u=1
2 0 -1 +5 -6 u=1
3 2 -2.737 +1 -2 +4 -6 : -1 -3 +4 u=1
4 0 +2:-4:+6 u=1
5 0 -7 +8 -9 +10 u=2 fill=1 lat=1
6 0 -12 +13 -14 +15 -11 +16 fill=2
7 0 (+12:-13:+14:-15) -17 +8 -18 +19 -11 +16
8 3 -1.1800 (+17:-8:+18:-19) -20 +21 -22 +23 -11 +16
9 4 -1.286 -20 +21 -22 +23 +11 -24
10 4 -1.286 -20 +21 -22 +23 -16 +25
11 0 +20:-21:+22:-23:+24:-25

```

```

$CYLINDER OF URANYL NITRATE
$CYLINDER VOID
$CYLINDER OF ALUMINUM
$VOID
$CELL FILLED WITH 1-6
$3X2X1 ARRAY
$CUBOID VOID
$PLEXIGLASS REFLECTOR (SIDES)
$PLEXIGLASS REFLECTOR (TOP)
$PLEXIGLASS REFLECTOR (BOTTOM)
$ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 8.06
2 cz 8.38
3 pz 0.0
4 pz -0.3201
5 pz +89.78
6 pz +119.1
7 px +15.25
8 px -15.25
9 py +15.25
10 py -15.25
11 pz +121.68
12 px +76.2499
13 px -15.2499
14 py +45.7499
15 py -15.2499
16 pz - .32
17 px +106.75
18 py +76.25
19 py -45.75
20 px +127.55
21 px -36.05
22 py +97.05
23 py -66.55
24 pz +141.88
25 pz -21.12

```

mode n

imp:n 1 9r 0

```

m1 92234.50c 9.36025-6
92235.50c 8.49695-4
92236.50c 3.94113-6
92238.50c 4.83719-5
7014.50c 2.12023-3
8016.50c 3.72526-2
1001.50c 5.84358-2

```

mt1 lwtr.01t

```

m2 12000.51c 6.78153-4
13027.50c 5.95056-2
14000.50c 3.52126-4
22000.51c 1.03277-5
24000.50c 5.38898-5
25055.51c 2.10015-5
26000.50c 1.38721-4
29000.50c 6.42881-5

```

```

m3 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2

```

```

m4 7014.50c 5.5290-5
8016.50c 1.4231-2
1001.50c 5.5166-2
6012.50c 3.3966-2
15031.51c 3.8504-4
17000.50c 3.5605-4

```

kcode 1000 1.0 10 100

```

ksrc 0 0 5 30.5 0 5 61.0 0 5 0 30.5 5 30.5 30.5 5
61.0 30.5 5

```

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print

```

TH01
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $2X2X2 ARRAY
9 0 +14:-15:+16:-17:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +10.875
9 px -10.875
10 py +10.875
11 py -10.875
12 pz +19.125
13 pz -1.355
14 px +32.62499
15 px -10.87499
16 py +32.62499
17 py -10.87499
18 pz +39.60499
19 pz -1.35499

```

```

mode n
imp:n 1 7r 0
ml 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
kcode 1000 1.0 10 100
ksrc 0 0 5 21.75 0 5 0 21.75 5 21.75 21.75 5
    0 0 25.48 21.75 0 25.48 0 21.75 25.48 21.75 21.75 25.48
print

```

```

TH02
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $2X2X2 ARRAY
9 3 -0.9300 -20 +21 -22 +23 -24 +25 #8 $PARAFFIN REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +11.80
9 px -11.80
10 py +11.80
11 py -11.80
12 pz +20.05
13 pz -2.28
14 px +35.39999
15 px -11.79999
16 py +35.39999
17 py -11.79999
18 pz +42.37999
19 pz -2.27999
20 px +36.67
21 px -13.07
22 py +36.67
23 py -13.07
24 pz +43.65
25 pz -3.55

```

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```

mode n
imp:n 1 8r 0
m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m3 1001.50c 8.26407-2
    6012.50c 3.97311-2
mt3 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 5 22 0 5 0 22 5 22 22 5
    0 0 27 22 0 27 0 22 27 22 22 27
print

```

```

TH03
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $2X2X2 ARRAY
9 3 -0.9300 -20 +21 -22 +23 -24 +25 #8 $PARAFFIN REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +13.615
9 px -13.615
10 py +13.615
11 py -13.615
12 pz +21.865
13 pz -4.095
14 px +40.84499
15 px -13.61499
16 py +40.84499
17 py -13.61499
18 pz +47.82499
19 pz -4.09499
20 px +44.655
21 px -17.425
22 py +44.655
23 py -17.425
24 pz +51.635
25 pz -7.905

```

```

mode n
imp:n 1 8r 0
m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m3 1001.50c 8.26407-2
    6012.50c 3.97311-2
mt3 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 5 27 0 5 0 27 5 27 27 5
    0 0 31 27 0 31 0 27 31 27 27 31
print

```

```

TH04
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $2X2X2 ARRAY
9 3 -0.9300 -20 +21 -22 +23 -24 +25 #8 $PARAFFIN REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

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mode	temp	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
mode	temp	n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499	-29.895	+59.205	-29.895	+66.185	-20.375
9.84601-4	92235.50c	1	8r	0	0.0	-0.64	+17.5609	+17.77	+18.41	-14.655	-14.655	-14.655	+14.655	+14.655	-14.655	+22.905	-5.135	+43.96499	-14.65499	-14.65499	+50.94499	-5.13499					

```

7014.50c 2.12458-3
1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
m3 1001.50c 8.26407-2
6012.50c 3.97311-2
mt3 lwtr.01t
kcode 1000 1.0 10 100
ksrc 0 0 8 29 0 8 0 29 8 29 29 8
0 0 36 29 0 36 0 29 36 29 29 36
print

```

```

TH06
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $2X2X2 ARRAY
9 2 -1.1800 -20 +21 -22 +23 -24 +25 #8 $PLEXIGLASS REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +11.66
9 px -11.66
10 py +11.66
11 py -11.66
12 pz +19.91
13 pz -2.14
14 px +34.97999
15 px -11.65999
16 py +34.97999
17 py -11.65999
18 pz +41.95999
19 pz -2.13999
20 px +36.35
21 px -12.93
22 py +36.35
23 py -12.93
24 pz +43.23
25 pz -3.41

```

```

mode n
imp:n 1 8r 0
m1 92235.50c 9.84601-4
92238.50c 7.76892-5
8016.50c 3.74161-2
7014.50c 2.12458-3
1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
1001.50c 5.68187-2
6012.50c 3.55117-2
kcode 1000 1.0 10 100
ksrc 0 0 5 23 0 5 0 23 5 23 23 5
0 0 27 23 0 27 0 23 27 23 23 27
print

```

```

TH07
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $3X3X3 ARRAY
9 0 +14:-15:+16:-17:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +13.40

```

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```

9  px -13.40
10 py +13.40
11 py -13.40
12 pz +21.65
13 pz -3.88
14 px +40.19999
15 px -40.19999
16 py +40.19999
17 py -40.19999
18 pz +47.17999
19 pz -29.40999

```

```
mode n
```

```
imp:n 1 7r 0
```

```

m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2

```

```
mt1 lwtr.01t
```

```

m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2

```

```
kcode 1000 1.0 10 100
```

```

ksrc -27 -27 -20 0 -27 -20 27 -27 -20 -27 0 -20 0 0 -20 27 0 -20
      -27 27 -20 0 27 -20 27 27 -20
      -27 -27 5 0 -27 5 27 -27 5 -27 0 5 0 0 5 27 0 5
      -27 27 5 0 27 5 27 27 5
      -27 -27 30 0 -27 30 27 -27 30 -27 0 30 0 0 30 27 0 30
      -27 27 30 0 27 30 27 27 30

```

```
print
```

```
TH08
```

```

1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $3X3X3 ARRAY
9 3 -0.9300 -20 +21 -22 +23 -24 +25 #8 $PARAFFIN REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 9.52
2  cz 10.16
3  pz 0.0
4  pz -0.64
5  pz +17.5609
6  pz +17.77
7  pz +18.41
8  px +14.67
9  px -14.67
10 py +14.67
11 py -14.67
12 pz +22.92
13 pz -5.15
14 px +44.00999
15 px -44.00999
16 py +44.00999
17 py -44.00999
18 pz +50.98999
19 pz -33.21999
20 px +45.28
21 px -45.28
22 py +45.28
23 py -45.28
24 pz +52.26
25 pz -34.49

```

```
mode n
```

```
imp:n 1 8r 0
```

```

m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2

```

```
mt1 lwtr.01t
```

```

m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2

```

```
m3 1001.50c 8.26407-2
```

```
6012.50c 3.97311-2
```

```
mt3 lwtr.01t
```

```
kcode 1000 1.0 10 100
```

```
ksrc -29 -29 -20 0 -29 -20 29 -29 -20 -29 0 -20 0 0 -20 29 0 -20
```

```
-29 29 -20 0 29 -20 29 29 -20
```

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```

-29 -29 8 0 -29 8 29 -29 8 -29 0 8 0 0 8 29 0 8
-29 29 8 0 29 8 29 29 8
-29 -29 36 0 -29 36 29 -29 36 -29 0 36 0 0 36 29 0 36
-29 29 36 0 29 36 29 29 36

```

print

```

TH09
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $3X3X3 ARRAY
9 3 -0.9300 -20 +21 -22 +23 -24 +25 #8 $PARAFFIN REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +17.005
9 px -17.005
10 py +17.005
11 py -17.005
12 pz +25.255
13 pz -7.485
14 px +51.01499
15 px -51.01499
16 py +51.01499
17 py -51.01499
18 pz +57.99499
19 pz -40.22499
20 px +54.825
21 px -54.825
22 py +54.825
23 py -54.825
24 pz +61.805
25 pz -44.035

```

```

mode n
imp:n 1 8r 0
m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m3 1001.50c 8.26407-2
    6012.50c 3.97311-2
mt3 lwtr.01t
kcode 1000 1.0 10 100
ksrc -34 -34 -28 0 -34 -28 34 -34 -28 -34 0 -28 0 0 -28 34 0 -28
      -34 34 -28 0 34 -28 34 34 -28
      -34 -34 5 0 -34 5 34 -34 5 -34 0 5 0 0 5 34 0 5
      -34 34 5 0 34 5 34 34 5
      -34 -34 33 0 -34 33 34 -34 33 -34 0 33 0 0 33 34 0 33
      -34 34 33 0 34 33 34 34 33

```

print

```

TH010
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $3X3X3 ARRAY
9 3 -0.9300 -20 +21 -22 +23 -24 +25 #8 $PARAFFIN REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41

```

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```

8  px +18.425
9  px -18.425
10 py +18.425
11 py -18.425
12 pz +26.675
13 pz -8.905
14 px +55.27499
15 px -55.27499
16 py +55.27499
17 py -55.27499
18 pz +62.25499
19 pz -44.48499
20 px +70.515
21 px -70.515
22 py +70.515
23 py -70.515
24 pz +77.495
25 pz -59.725

```

```

mode n
imp:n 1 8r 0
m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
m3 1001.50c 8.26407-2
    6012.50c 3.97311-2
mt3 lwtr.01t
kcode 1000 1.0 10 100
ksrc -37 -37 -30 0 -37 -30 37 -37 -30 -37 0 -30 0 0 -30 37 0 -30
      -37 37 -30 0 37 -30 37 37 -30
      -37 -37 5 0 -37 5 37 -37 5 -37 0 5 0 0 5 37 0 5
      -37 37 5 0 37 5 37 37 5
      -37 -37 40 0 -37 40 37 -37 40 -37 0 40 0 0 40 37 0 40
      -37 37 40 0 37 40 37 37 40
print

```

```

TH011
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $3X3X3 ARRAY
9 2 -1.1800 -20 +21 -22 +23 -24 +25 #8 $PLEXIGLASS REFLECTOR
10 0 +20:-21:+22:-23:+24:-25 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1  cz 9.52
2  cz 10.16
3  pz 0.0
4  pz -0.64
5  pz +17.5609
6  pz +17.77
7  pz +18.41
8  px +14.54
9  px -14.54
10 py +14.54
11 py -14.54
12 pz +22.79
13 pz -5.02
14 px +43.61999
15 px -43.61999
16 py +43.61999
17 py -43.61999
18 pz +50.59999
19 pz -32.82999
20 px +44.89
21 px -44.89
22 py +44.89
23 py -44.89
24 pz +51.87
25 pz -34.10

```

```

mode n
imp:n 1 8r 0
m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2
mt1 lwtr.01t

```

```

m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
kcode 1000 1.0 10 100
ksrc -29 -29 -23 0 -29 -23 29 -29 -23 -29 0 -23 0 0 -23 29 0 -23
      -29 29 -23 0 29 -23 29 29 -23
      -29 -29 5 0 -29 5 29 -29 5 -29 0 5 0 0 5 29 0 5
      -29 29 5 0 29 5 29 29 5
      -29 -29 32 0 -29 32 29 -29 32 -29 0 32 0 0 32 29 0 32
      -29 29 32 0 29 32 29 29 32
print

```

```

TH012
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $4X4X4 ARRAY
9 0 +14:-15:+16:-17:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +15.495
9 px -15.495
10 py +15.495
11 py -15.495
12 pz +23.745
13 pz -5.975
14 px +108.46499
15 px -15.49499
16 py +108.46499
17 py -15.49499
18 pz +112.90499
19 pz -5.97499

```

```

mode n
imp:n 1 7r 0
m1 92235.50c 9.84601-4
    92238.50c 7.76892-5
    8016.50c 3.74161-2
    7014.50c 2.12458-3
    1001.50c 5.78356-2
mt1 lwtr.01t
m2 8016.50c 1.42047-2
    1001.50c 5.68187-2
    6012.50c 3.55117-2
kcode 1000 1.0 10 100
ksrc 0 0 5 31 0 5 62 0 5 93 0 5 0 31 5 31 31 5 62 31 5 93 31 5
      0 62 5 31 62 5 62 62 5 93 62 5 0 93 5 31 93 5 62 93 5 93 93 5
      0 0 35 31 0 35 62 0 35 93 0 35 0 31 35 31 31 35 62 31 35 93 31 35
      0 62 35 31 62 35 62 62 35 93 62 35 0 93 35 31 93 35 62 93 35 93 93 35
      0 0 65 31 0 65 62 0 65 93 0 65 0 31 65 31 31 65 62 31 65 93 31 65
      0 62 65 31 62 65 62 62 65 93 62 65 0 93 65 31 93 65 62 93 65 93 93 65
      0 0 95 31 0 95 62 0 95 93 0 95 0 31 95 31 31 95 62 31 95 93 31 95
      0 62 95 31 62 95 62 62 95 93 62 95 0 93 95 31 93 95 62 93 95 93 93 95
print

```

```

TH013
1 1 -1.555 -1 +3 -5 u=1 $CYLINDER OF URANYL NITRATE
2 0 -1 +5 -6 u=1 $CYLINDER VOID
3 2 -1.1800 +1 -2 +4 -7 u=1 $CYLINDER OF PLEXIGLASS
4 2 -1.1800 -1 +6 -7 u=1 $PLEXIGLASS (TOP)
5 2 -1.1800 -1 -3 +4 u=1 $PLEXIGLASS (BOTTOM)
6 0 +2:-4:+7 u=1 $VOID
7 0 -8 +9 -10 +11 -12 +13 u=2 fill=1 lat=1 $CELL FILLED WITH 1-6
8 0 -14 +15 -16 +17 -18 +19 fill=2 $5X5X5 ARRAY
9 0 +14:-15:+16:-17:+18:-19 $ZERO IMPORTANCE OUTSIDE WORLD

```

```

1 cz 9.52
2 cz 10.16
3 pz 0.0
4 pz -0.64
5 pz +17.5609
6 pz +17.77
7 pz +18.41
8 px +17.36
9 px -17.36
10 py +17.36
11 py -17.36
12 pz +25.61

```

13 pz -7.84
 14 px +86.79999
 15 px -86.79999
 16 py +86.79999
 17 py -86.79999
 18 pz +92.50999
 19 pz -74.73999

mode n

imp:n 1 7r 0
 m1 92235.50c 9.84601-4
 92238.50c 7.76892-5
 8016.50c 3.74161-2
 7014.50c 2.12458-3
 1001.50c 5.78356-2

mt1 lwtr.01t
 m2 8016.50c 1.42047-2
 1001.50c 5.68187-2
 6012.50c 3.55117-2

kcode 1000 1.0 10 100

ksrc -70 -70 -61 -35 -70 -61 0 -70 -61 35 -70 -61 70 -70 -61
 -70 -35 -61 -35 -35 -61 0 -35 -61 35 -35 -61 70 -35 -61
 -70 0 -61 -35 0 -61 0 0 -61 35 0 -61 70 0 -61
 -70 35 -61 -35 35 -61 0 35 -61 35 35 -61 70 35 -61
 -70 70 -61 -35 70 -61 0 70 -61 35 70 -61 70 70 -61
 -70 -70 -28 -35 -70 -28 0 -70 -28 35 -70 -28 70 -70 -28
 -70 -35 -28 -35 -35 -28 0 -35 -28 35 -35 -28 70 -35 -28
 -70 0 -28 -35 0 -28 0 0 -28 35 0 -28 70 0 -28
 -70 35 -28 -35 35 -28 0 35 -28 35 35 -28 70 35 -28
 -70 70 -28 -35 70 -28 0 70 -28 35 70 -28 70 70 -28
 -70 -70 5 -35 -70 5 0 -70 5 35 -70 5 70 -70 5
 -70 -35 5 -35 -35 5 0 -35 5 35 -35 5 70 -35 5
 -70 0 5 -35 0 5 0 0 5 35 0 5 70 0 5
 -70 35 5 -35 35 5 0 35 5 35 35 5 70 35 5
 -70 70 5 -35 70 5 0 70 5 35 70 5 70 70 5
 -70 -70 38 -35 -70 38 0 -70 38 35 -70 38 70 -70 38
 -70 -35 38 -35 -35 38 0 -35 38 35 -35 38 70 -35 38
 -70 0 38 -35 0 38 0 0 38 35 0 38 70 0 38
 -70 35 38 -35 35 38 0 35 38 35 35 38 70 35 38
 -70 70 38 -35 70 38 0 70 38 35 70 38 70 70 38
 -70 -70 71 -35 -70 71 0 -70 71 35 -70 71 70 -70 71
 -70 -35 71 -35 -35 71 0 -35 71 35 -35 71 70 -35 71
 -70 0 71 -35 0 71 0 0 71 35 0 71 70 0 71
 -70 35 71 -35 35 71 0 35 71 35 35 71 70 35 71
 -70 70 71 -35 70 71 0 70 71 35 70 71 70 70 71

print