

PRUEBA

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Tarea 3

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Parte teórica

Esta parte del proyecto será sobre regresión lineal.

Supongamos que quieren explicar una variable estadística Y (por ejemplo altura) utilizando la información de p variables X_1, \dots, X_p (peso, ancho de huesos, etc). Si se toma una muestra de N individuos, cada variable está representada por un vector de tamaño N . La información de las variables explicativas se pueden juntar en una matriz

$$X = [X^1 \mid \dots \mid X^p]$$

de tamaño $n \times p$ donde cada columna es una variable y cada fila uno de los individuos de la muestra. Tienen que contestar lo siguiente:

- Plantear el problema de regresión lineal como un problema de mínimos cuadrados, encontrar el vector beta que resuelva

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$$\hat{\beta} = \operatorname{argmin}_{\beta \in \mathbb{R}^p} \|Y - X\beta\|^2$$

y encontrar la solución teórica. ¿Por qué este planteamiento nos da un ajuste lineal a nuestros datos?

La solución del problema de mínimos cuadrados nos da una aproximación lineal a nuestros datos porque los parámetros β son lineales. Esto es, los parámetros capturan sólo la parte lineal que nos ayuda a explicar la variable 'Y' a partir de nuestros datos 'X'. Por ejemplo, en el caso de dos dimensiones donde estimamos la

variable Y a partir de la ecuación $\hat{Y} = B_0 + B_1 X$, el modelo se asemeja a una recta donde el parámetro B_0 representa la ordenada al origen de dicha recta y B_1 captura la pendiente o relación lineal entre las variables X y Y

¿Podríamos usarlo para ajustar polinomios (ej $y = x^2$)?

Podemos ajustar polinomios del modo $y = x^2$ y mayores sin ningún problema utilizando el resultado de regresión lineal para las β 's. Lo que es importante notar es que aunque la regresión de polinomio ajusta un modelo no-lineal sobre los datos, el problema de estimación estadística continúa siendo lineal (es lineal en las β 's aunque no en las variables x) lo que es consecuencia directa de que la función $E(Y|X)$ es lineal en los parámetros beta estimados.

$$\nabla \|Y - X\beta\|^2 = \nabla (Y^T Y + \beta^T X^T X \beta - 2\beta^T X^T Y)$$

$$0 = 2X^T X \beta - 2X^T Y$$

Dividiendo ambos lados entre dos y resolviendo para Beta tenemos:

$$\beta_{OLS} = (X^T X)^{-1} X^T Y$$

- Argumentar la relación entre la solución encontrada y un problema de proyección en subespacios vectoriales de álgebra lineal ¿Cuál es la relación particular con el teorema de Pitágoras?

Cuando hay una relación lineal entre dos variables, la varianza de la variable dependiente se puede descomponer en dos varianzas: la de los pronósticos, debido a la relación que la variable dependiente guarda con la variable independiente, y la de los errores o residuos. Esta relación se cumple tanto para la Regresión Lineal Simple como para la Múltiple. Esta descomposición de la varianza de la variable dependiente en dos varianzas es el "Teorema de Pitágoras" del Análisis de Regresión Lineal que, para efectos del modelo anterior, la varianza de las puntuaciones observadas es igual a la varianza de las puntuaciones estimadas más la varianza de los residuos.

- ¿Que logramos al agregar una columna de unos en la matriz X ? es decir, definir mejor

$$X = [1_n \mid X^1 \mid \dots \mid X^p]$$

con $1_n = [1, 1, \dots, 1]^T$

El parámetro β_0 que se captura con la columna de unos dentro de la matriz X nos ayuda a incorporar la información no contenida en las variables de nuestro modelo. De esta manera, el estimador \hat{Y} no necesariamente inicia desde el origen, lo que ayuda a reducir los errores en nuestra estimación.

- Plantear el problema de regresión ahora como un problema de estadística

donde los errores son no correlacionados con distribución

- ¿Cual es la función de verosimilitud del problema anterior?
Hint: empiecen por escribir el problema como

Sea

$$Y = X\beta + \epsilon$$

con

$$\epsilon \sim N(0, \sigma^2 I_n)$$

con I_n la matriz identidad. Y concluyan entonces que

$$Y \sim N(X\beta, \sigma^2 I_n)$$

Escriban entonces la verosimilitud como

$$\begin{aligned} L(\beta, \sigma^2; Y, X) &= \prod_{i=1}^p f_y(y_i | X; \beta, \sigma^2) \\ &= \prod_{i=1}^p (2\pi\sigma^2)^{-1/2} \exp\left(-\frac{1}{2} \frac{(y_i - x_i\beta)^2}{\sigma^2}\right) \\ &= (2\pi\sigma^2)^{-N/2} \exp\left(-\frac{1}{2\sigma^2} \sum_{i=1}^p (y_i - x_i\beta)^2\right) \end{aligned}$$

- Mostrar que la solución de máxima verosimilitud es la misma que la del problema de mínimos cuadrados. La función log de máxima verosimilitud es:

$$l(\beta, \sigma^2; Y, X) = -\frac{N}{2} \ln(2\pi) - \frac{N}{2} \ln(\sigma^2) - \frac{1}{2\sigma^2} \sum_{i=1}^N (y_i - x_i\beta)^2$$

El siguiente paso es derivar respecto a cada una de las β :

$$\begin{aligned} \nabla_{\beta} l(\beta, \sigma^2; Y, X) \\ \nabla_{\beta} \left(-\frac{N}{2} \ln(2\pi) - \frac{N}{2} \ln(\sigma^2) - \frac{1}{2\sigma^2} \sum_{i=1}^N (y_i - x_i\beta)^2 \right) \\ = \frac{1}{\sigma^2} \sum_{i=1}^N x_i^T (y_i - x_i\beta) \\ = \frac{1}{\sigma^2} \left(\sum_{i=1}^N x_i^T y_i - \sum_{i=1}^N x_i^T x_i \beta \right) \end{aligned}$$

Que es igual a cero solo si

$$\sum_{i=1}^N x_i^T y_i - \sum_{i=1}^N x_i^T x_i \beta = 0$$

Esto se satisface si:

$$\beta = \left(\sum_{i=1}^N x_i^T x_i \right)^{-1} \sum_{i=1}^N x_i^T y_i = (X^T X)^{-1} X^T y$$

- Investiga el contenido del Teorema de Gauss-Markov sobre mínimos cuadrados.

El Teorema de Gauss-Márkov establece que en un modelo lineal general (MLG) en el que se cumplan los siguientes supuestos: - Correcta especificación: el MLG ha de ser una combinación lineal de los parámetros β y no necesariamente de las variables: $Y = X\beta + u$ - Muestreo aleatorio simple: la muestra de observaciones del vector $(y_i, x_{2i}, x_{3i}, \dots, x_{ki})$ es una muestra aleatoria simple y, por lo tanto, el vector (y_i, X_i') es independiente del vector (y_j, X_j')

- Esperanza condicionada de los errores nula: $E(u_i | X_i') = 0$ - Correcta identificación: la matriz de regresoras (X) ha de tener rango completo: $\text{rg}(X) = K \leq N$ - Homocedasticidad: la varianza del error condicional a las variables explicativas es constante a lo largo de las observaciones: $\text{Var}(U|X) = \sigma^2 I$

El estimador mínimo cuadrático ordinario (MCO) de β es el estimador lineal e insesgado óptimo, es decir, el estimador MCO es el estimador eficiente dentro de la clase de estimadores lineales e insesgados.

Parte aplicada

Para esta parte pueden usar la base de datos diamonds que sugirieron, aunque hay puntos adicionales si usan alguna base original interesante.

Cargar la base que se encuentra en el paquete ggplot2. Los comandos que pueden usar para cargar la base diamonds a su ambiente de trabajo en R son:

```
#install.packages("ggplot2")
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 3.4.1
```

```
data(diamonds)
head(diamonds)
```

```
## # A tibble: 6 x 10
##   carat      cut color clarity depth table price      x      y      z
##   <dbl>    <ord> <ord>   <ord> <dbl> <dbl> <int> <dbl> <dbl> <dbl>
## 1  0.23    Ideal     E     SI2   61.5   55   326   3.95   3.98   2.43
## 2  0.21    Premium  E     SI1   59.8   61   326   3.89   3.84   2.31
## 3  0.23     Good     E     VS1   56.9   65   327   4.05   4.07   2.31
## 4  0.29    Premium  I     VS2   62.4   58   334   4.20   4.23   2.63
## 5  0.31     Good     J     SI2   63.3   58   335   4.34   4.35   2.75
## 6  0.24 Very Good  J     VVS2   62.8   57   336   3.94   3.96   2.48
```

```
?diamonds
```

```
## starting httpd help server ...
```

```
## done
```

Posteriormente deben hacer una regresión lineal. Su objetivo es explicar la variable price usando las demás variables. Noten que algunas variables no son numéricas, por lo que no pueden incluirse en un análisis crudo de regresión lineal. Para este proyecto NO es necesario saber transformar las variables no numéricas para poder usarlas en la regresión; hacerlo es optativo, de hecho, las paqueterías lo hacen por ustedes pero deben ser cuidadosos. Pueden usar la función lm de R para su análisis de regresión.

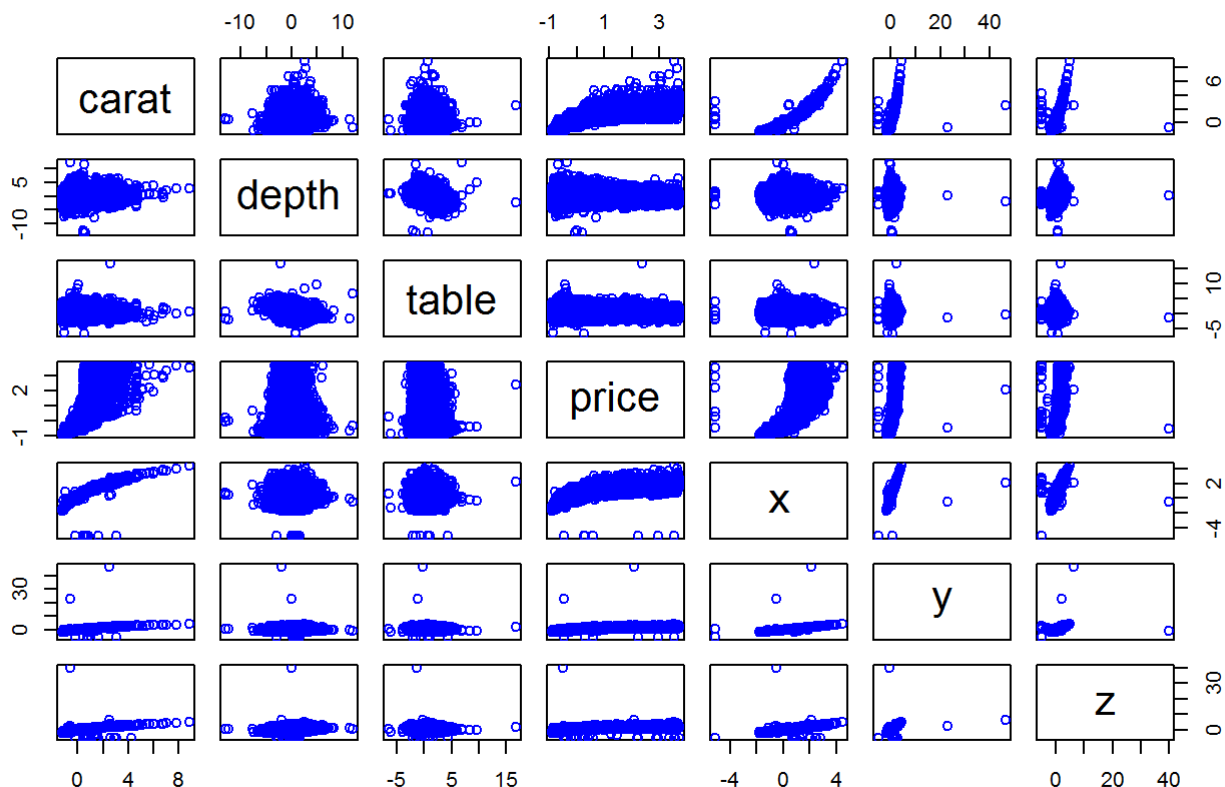
Creamos un nuevo data_frame que solo contiene los datos que vamos a utilizar, es decir, las variables numéricas centralizadas

```
diamantes = diamonds[ ,c(1,5,6,7,8,9,10)]
diamantes0 = scale(diamantes)
diamantes0 <- as.data.frame(diamantes0)
```

Obtenemos una matriz de dispersión para formarnos una apreciación inicial de las relaciones entre las variables.

```
pairs(diamantes0, col= "blue", main="Matriz de dispersión de las variables numéricas")
```

Matriz de dispersión de las variables numéricas



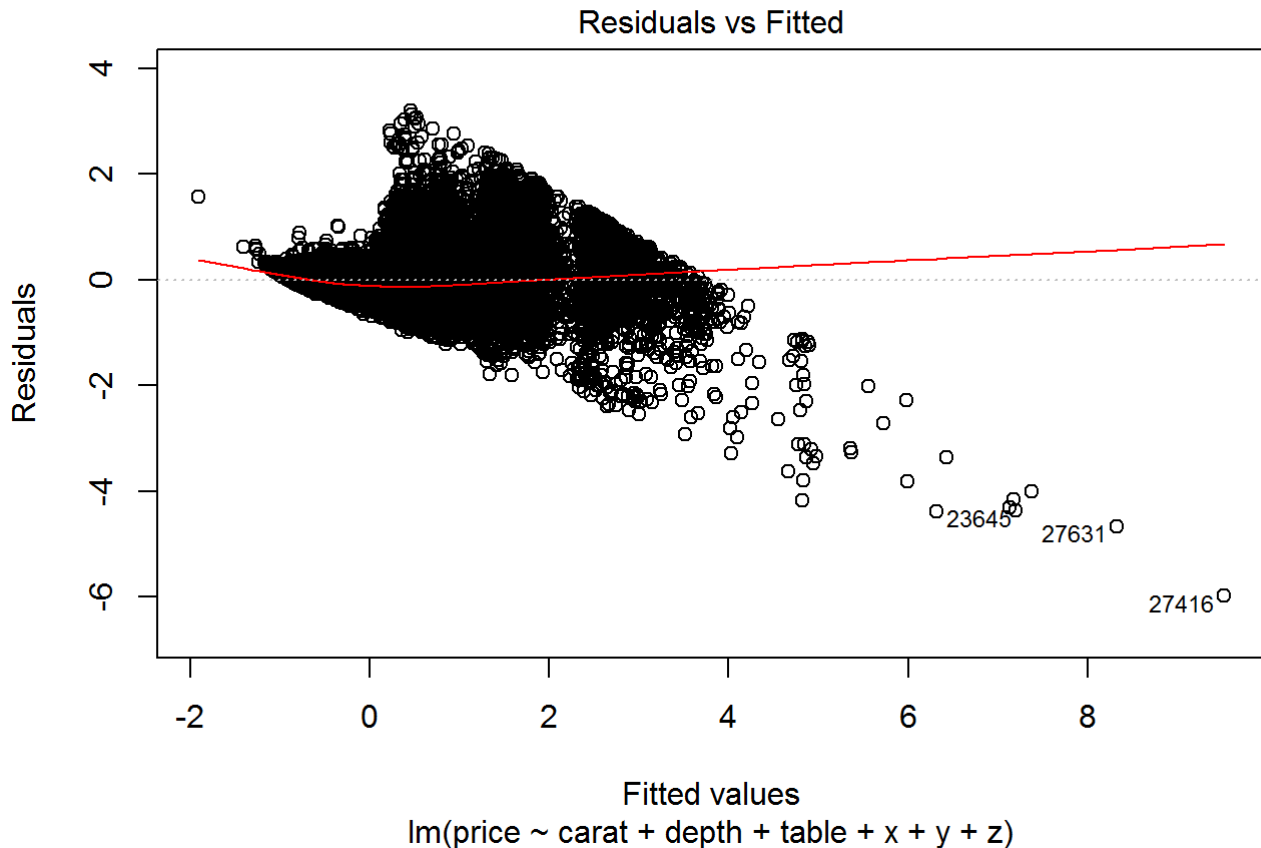
Gracias a la matriz de las variables en pares podemos discernir de forma rápida una relación positiva entre el precio y la variable “carat”, aunque la varianza aumenta conforme aumenta esta variable. También podemos observar que no hay mucha relación entre el precio y las variables “y”(ancho en mm) y “z”(profundidad en

mm).

```
#Realizamos la regresión lineal usando todas las variables numéricas
modelo1 = lm(price ~ carat + depth + table + x + y + z, data = diamantes0)
summary(modelo1)
```

```
##
## Call:
## lm(formula = price ~ carat + depth + table + x + y + z, data = diamantes0)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -5.9853 -0.1542 -0.0127  0.0872  3.1982
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.359e-14  1.616e-03   0.000  1.00000
## carat        1.270e+00  7.509e-03 169.085 < 2e-16 ***
## depth       -7.295e-02  1.976e-03 -36.910 < 2e-16 ***
## table       -5.738e-02  1.727e-03 -33.216 < 2e-16 ***
## x           -3.699e-01  1.211e-02 -30.547 < 2e-16 ***
## y            1.899e-02  7.307e-03   2.599  0.00937 **
## z            7.364e-03  7.837e-03   0.940  0.34744
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.3752 on 53933 degrees of freedom
## Multiple R-squared:  0.8592, Adjusted R-squared:  0.8592
## F-statistic: 5.486e+04 on 6 and 53933 DF, p-value: < 2.2e-16
```

```
plot(modelo1, which =1)
```



- ¿Qué tan bueno fue el ajuste?

Del “summary” de la regresión podemos observar inicialmente la información de los residuales, que son todas las diferencias entre el precio estimado y el precio real; una media lo más cercana a cero es lo que querríamos ver aquí, pues indicaría que el modelo es muy certero. En la gráfica vemos los valores predichos contra los residuales, en un modelo perfecto, la media de los residuales sería 0 por lo que la línea roja iría perfectamente a lo largo de la línea que representa el 0. En seguida podemos apreciar los coeficientes de la intercepción y de cada una de las variables, usados para calcular las predicciones. Así también confirmamos que las variables “z” y “y” son las menos importantes para el modelo, esto lo sabemos por el valor p en la columna “Pr(>|t|)”, que se resta a 1 para conocer la probabilidad de que NO sean relevantes al modelo, es decir, para todas las variables queremos que este sea lo más pequeño posible.

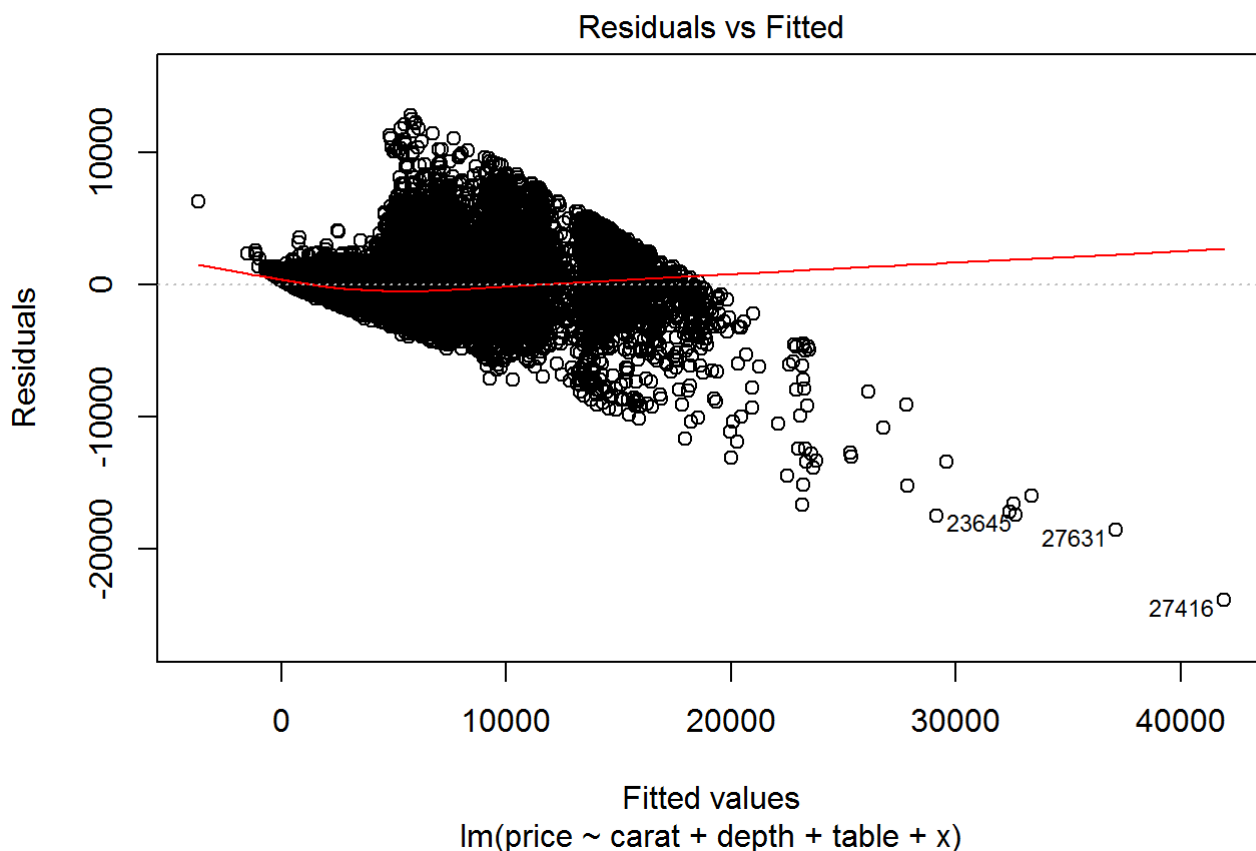
- ¿Qué medida puede ayudarnos a saber la calidad del ajuste? ¿Cuál fue el valor de R^2 que ajustó su modelo y que relación tienen con la calidad del ajuste?

Al final del summary podemos apreciar la R cuadrada, que es la cantidad de variabilidad en lo que estas prediciendo que es explicado por el modelo, en este caso podríamos decir que un 85.92 % del precio de los diamantes es explicado por las variables en nuestro modelo. Es una buena medida de la calidad del ajuste.

```
# Por curiosidad, realizamos otra regresión lineal, dejando fuera a "y" y "z", que no aportaban mucho en el modelo anterior
modelo2 = lm(price ~ carat + depth + table + x, data = diamantes)
summary(modelo2)
```

```
##
## Call:
## lm(formula = price ~ carat + depth + table + x, data = diamantes)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -23894.2  -615.0   -50.6    346.9  12760.7
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  20765.521    418.984   49.56  <2e-16 ***
## carat       10692.510     63.168  169.27  <2e-16 ***
## depth      -201.231      4.852  -41.48  <2e-16 ***
## table       -102.824      3.082  -33.37  <2e-16 ***
## x          -1226.773     26.678  -45.98  <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1497 on 53935 degrees of freedom
## Multiple R-squared:  0.8592, Adjusted R-squared:  0.8592
## F-statistic: 8.228e+04 on 4 and 53935 DF, p-value: < 2.2e-16
```

```
plot(modelo2, which=1)
```



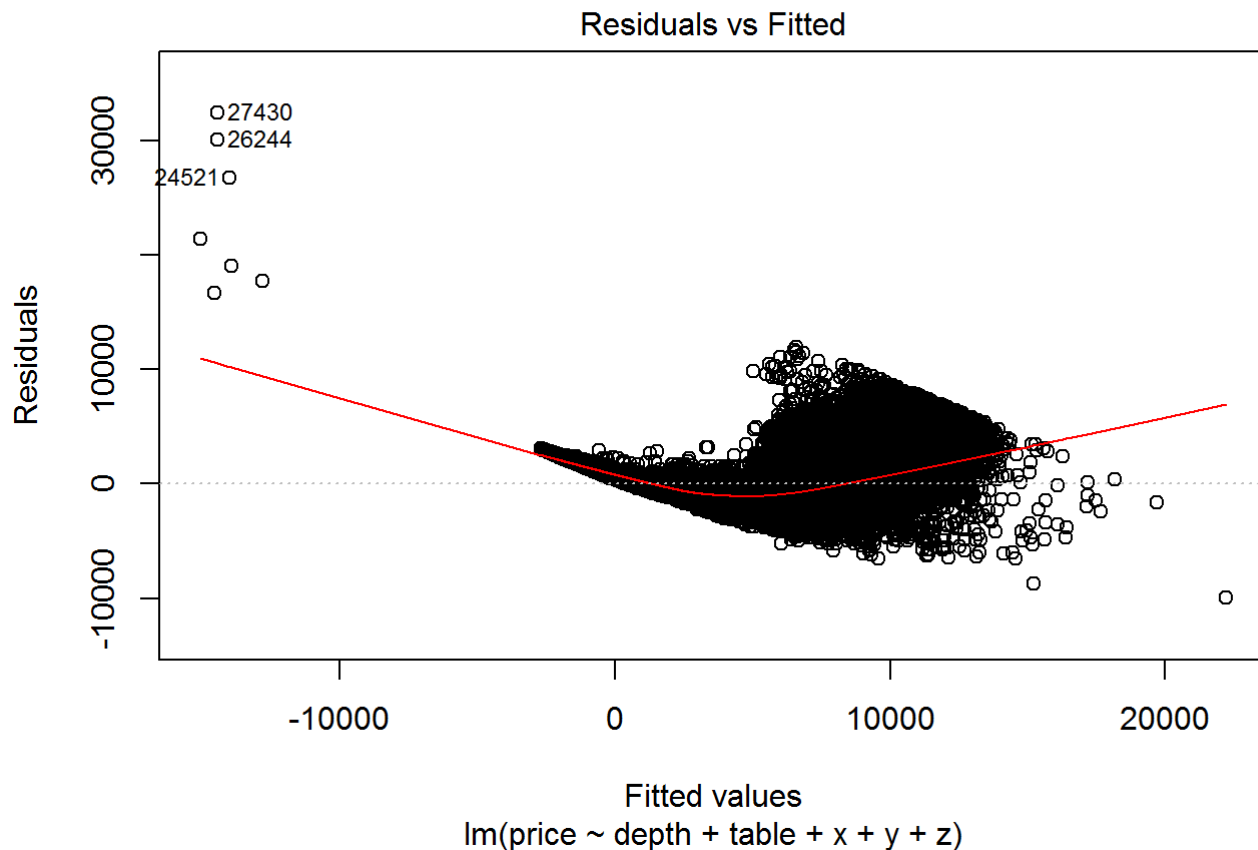
Aquí vemos, como era esperado, que deshacernos de las dos variables que no eran relevantes prácticamente no modifica valores como la media de los residuales o la R cuadrada.


```
# Realizando otra regresión lineal, pero ahora dejamos fuera la variable "carat", que es una variable relevante para el modelo
```

```
modelo3 = lm(price ~ depth + table + x + y + z, data = diamantes)
summary(modelo3)
```

```
##
## Call:
## lm(formula = price ~ depth + table + x + y + z, data = diamantes)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -9994  -1256   -197    945   32470
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept) -8770.608    509.448  -17.216 < 2e-16 ***
## depth       -10.501      6.661   -1.576  0.1149
## table       -84.855      3.813  -22.255 < 2e-16 ***
## x           2918.492     43.346   67.330 < 2e-16 ***
## y            205.086     31.555    6.499 8.13e-11 ***
## z             91.814     54.802    1.675  0.0939 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1852 on 53934 degrees of freedom
## Multiple R-squared:  0.7846, Adjusted R-squared:  0.7846
## F-statistic: 3.929e+04 on 5 and 53934 DF,  p-value: < 2.2e-16
```

```
plot(modelo3, which=1)
```



Como era esperado, remover una variable importante, disminuyó el valor de R cuadrada y aumentó la media de los residuales (cuyo efecto puede verse en la recta de la gráfica).

- ¿Cual es el angulo entre Y y \hat{Y} estimada? Hint: usen la R^2 cuadrada y el arcocoseno

```
angulo <- acos(sqrt(.8592))
angulo * 180/pi
```

```
## [1] 22.03873
```

- Definan una funcion que calcule la logverosimilitud de unos parámetros β y σ^2 .

```
library(ggplot2)
diamonds_data = data(diamonds)
diamonds_short <- diamonds[,c(1,5,6,7,8,9,10)]
diamonds_x <- diamonds[,c(5,6,7,8,9,10)]
head(diamonds)
```

```
## # A tibble: 6 x 10
##   carat      cut color clarity depth table price      x      y      z
##   <dbl>    <ord> <ord>   <ord> <dbl> <dbl> <int> <dbl> <dbl> <dbl>
## 1  0.23    Ideal     E     SI2  61.5   55   326  3.95  3.98  2.43
## 2  0.21   Premium     E     SI1  59.8   61   326  3.89  3.84  2.31
## 3  0.23     Good     E     VS1  56.9   65   327  4.05  4.07  2.31
## 4  0.29   Premium     I     VS2  62.4   58   334  4.20  4.23  2.63
## 5  0.31     Good     J     SI2  63.3   58   335  4.34  4.35  2.75
## 6  0.24 Very Good     J    VVS2  62.8   57   336  3.94  3.96  2.48
```

```
diamonds_m <- data.matrix(diamonds_x)
```

```
n <- length(diamonds_x )
sigma_sq <- 0.8563
mod <- lm(formula = diamonds$price ~ diamonds$carat + diamonds$x + diamonds$y + diamonds$z +
diamonds$depth)
summary(mod)$coefficients[,1]
```

```
##   (Intercept) diamonds$carat      diamonds$x      diamonds$y      diamonds$z
##   12196.68697    10615.49551    -1369.67016         97.59636         64.19545
## diamonds$depth
##      -156.62430
```

```
Beta_1 <- c(12196.7, 10615.5, -1369.7, 97.6, 64.2, -156.6)
```

```
funcionVerosimilitud <- function(bet, sig){
  -(n/2)*(log(2*pi))-((n/2)*log(sig))-((1/(2*sig))*((diamonds$price-(diamonds_m*bet))*(diamonds$price-(diamonds_m*bet))))
}

funcionVerosimilitud(Beta_1,sigma_sq)
```

		depth	table	price	x
##	[1,]	-3.282475e+11	-2.625016e+11	-9.229809e+12	-1.336982e+09
##	[2,]	-2.350613e+11	-2.445948e+11	-6.991628e+12	-9.800311e+08
##	[3,]	-3.576484e+09	-4.662363e+09	-1.173071e+11	-2.014903e+07
##	[4,]	-1.934737e+07	-1.656826e+07	-6.078428e+08	-3.370601e+03
##	[5,]	-8.118887e+06	-6.704787e+06	-2.617386e+08	-1.860591e+03
##	[6,]	-6.039862e+07	-5.009247e+07	-1.637326e+09	-5.303196e+05
##	[7,]	-3.368377e+11	-2.819412e+11	-9.804740e+12	-1.336423e+09
##	[8,]	-2.518609e+11	-1.988149e+11	-7.471416e+12	-1.073031e+09
##	[9,]	-4.677712e+09	-4.109140e+09	-1.245916e+11	-1.855898e+07
##	[10,]	-1.740365e+07	-1.841351e+07	-6.224891e+08	-1.608318e+03
##	[11,]	-8.298144e+06	-5.949359e+06	-2.680264e+08	-2.560124e+03
##	[12,]	-6.044614e+07	-4.845546e+07	-1.676542e+09	-5.330319e+05
##	[13,]	-3.165915e+11	-3.229156e+11	-1.015804e+13	-1.288820e+09
##	[14,]	-2.543039e+11	-1.916422e+11	-7.785025e+12	-1.226616e+09
##	[15,]	-4.003267e+09	-4.245217e+09	-1.305771e+11	-1.789625e+07
##	[16,]	-1.830376e+07	-1.649991e+07	-6.485396e+08	-3.978113e+03
##	[17,]	-7.704273e+06	-5.679623e+06	-2.824468e+08	-2.973286e+03
##	[18,]	-6.169969e+07	-4.529388e+07	-1.786779e+09	-5.996874e+05
##	[19,]	-3.532468e+11	-2.721187e+11	-1.069970e+13	-1.533133e+09
##	[20,]	-2.584056e+11	-2.287927e+11	-8.105081e+12	-1.147996e+09
##	[21,]	-4.424983e+09	-3.466863e+09	-1.351584e+11	-2.234359e+07
##	[22,]	-2.015311e+07	-1.469127e+07	-6.751241e+08	-3.346860e+02
##	[23,]	-7.413525e+06	-6.383446e+06	-2.906214e+08	-5.850198e+03
##	[24,]	-5.443174e+07	-5.911940e+07	-1.807199e+09	-6.321352e+05
##	[25,]	-2.929195e+11	-3.335850e+11	-1.082199e+13	-1.690107e+09
##	[26,]	-2.397834e+11	-2.210963e+11	-8.244222e+12	-1.019716e+09
##	[27,]	-4.314689e+09	-3.591577e+09	-1.382565e+11	-1.959330e+07
##	[28,]	-1.906260e+07	-1.582654e+07	-6.944400e+08	-2.158435e+03
##	[29,]	-7.264068e+06	-7.396890e+06	-2.972451e+08	-6.171848e+03
##	[30,]	-5.715874e+07	-5.031987e+07	-1.848387e+09	-5.575169e+05
##	[31,]	-3.123590e+11	-2.818877e+11	-1.403491e+13	-1.366979e+09
##	[32,]	-2.350050e+11	-2.134998e+11	-1.063152e+13	-1.053920e+09
##	[33,]	-4.075323e+09	-3.851315e+09	-1.772887e+11	-1.991254e+07
##	[34,]	-1.705956e+07	-1.614795e+07	-8.805427e+08	-7.095350e+01
##	[35,]	-7.450105e+06	-6.442272e+06	-3.769036e+08	-1.320189e+04
##	[36,]	-5.287665e+07	-5.427806e+07	-2.343735e+09	-6.288854e+05
##	[37,]	-3.565316e+11	-3.020281e+11	-1.403491e+13	-1.252331e+09
##	[38,]	-2.691974e+11	-1.916034e+11	-1.063152e+13	-1.189702e+09
##	[39,]	-4.088795e+09	-3.851410e+09	-1.781718e+11	-2.144221e+07
##	[40,]	-1.849939e+07	-1.439404e+07	-8.849290e+08	-7.295199e+02
##	[41,]	-7.259703e+06	-5.950105e+06	-3.787811e+08	-7.692615e+03
##	[42,]	-5.805561e+07	-4.912799e+07	-2.355410e+09	-7.144348e+05
##	[43,]	-3.688788e+11	-2.720772e+11	-1.410482e+13	-1.360040e+09
##	[44,]	-2.241227e+11	-2.608450e+11	-1.068448e+13	-1.134351e+09
##	[45,]	-4.402449e+09	-3.471544e+09	-1.781718e+11	-2.352607e+07
##	[46,]	-1.888632e+07	-1.614181e+07	-8.849290e+08	-7.345823e+01
##	[47,]	-7.419185e+06	-5.713180e+06	-3.787811e+08	-8.944154e+03
##	[48,]	-6.308356e+07	-4.912799e+07	-2.355410e+09	-6.883792e+05
##	[49,]	-3.476815e+11	-3.123573e+11	-1.417491e+13	-1.366866e+09
##	[50,]	-2.421350e+11	-2.365791e+11	-1.073757e+13	-1.212084e+09
##	[51,]	-4.102289e+09	-4.115707e+09	-1.790571e+11	-2.039612e+07
##	[52,]	-1.855701e+07	-1.382801e+07	-8.893261e+08	-2.488101e+02
##	[53,]	-7.176516e+06	-5.709528e+06	-3.806633e+08	-8.178151e+03
##	[54,]	-5.898270e+07	-5.255132e+07	-2.367114e+09	-6.068332e+05
##	[55,]	-3.051075e+11	-3.335400e+11	-1.417491e+13	-1.305547e+09
##	[56,]	-2.445351e+11	-2.287532e+11	-1.079079e+13	-1.195146e+09

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## [60,] -6.197226e+07 -4.748589e+07 -2.378847e+09 -6.692082e+05
## [61,] -3.216752e+11 -2.817660e+11 -2.646279e+13 -1.754843e+09
## [62,] -2.574257e+11 -2.286457e+11 -2.004570e+13 -1.148582e+09
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## [65,] -6.735293e+06 -6.113751e+06 -7.106510e+08 -3.508958e+04
## [66,] -6.037202e+07 -5.074792e+07 -4.435134e+09 -8.537090e+05
## [67,] -3.334085e+11 -2.651958e+11 -2.655876e+13 -1.639609e+09
## [68,] -2.632190e+11 -2.133932e+11 -2.011840e+13 -1.204169e+09
## [69,] -4.238654e+09 -3.736597e+09 -3.354897e+11 -2.475515e+07
## [70,] -1.684637e+07 -1.523393e+07 -1.666282e+09 -1.525807e+04
## [71,] -6.731327e+06 -6.354905e+06 -7.132282e+08 -5.190223e+04
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## [73,] -3.431647e+11 -3.019005e+11 -2.665490e+13 -1.557575e+09
## [74,] -2.566016e+11 -2.133925e+11 -2.019123e+13 -1.181703e+09
## [75,] -4.501648e+09 -3.609827e+09 -3.367041e+11 -2.403896e+07
## [76,] -1.593446e+07 -1.641435e+07 -1.672314e+09 -1.229119e+04
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## [91,] -3.368539e+11 -2.799800e+11 -6.601324e+14 -2.602743e+09
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## [188,] -2.516179e+11 -2.193585e+11 -5.073351e+14 -1.924699e+09
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## [230,] -2.524277e+11 -1.971516e+11 -5.095298e+14 -1.565595e+09
```

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## [233,] -9.809271e+05 -5.122201e+05 -1.811558e+10 -3.429862e+06
## [234,] -9.118009e+07 -8.011156e+07 -1.126498e+11 -7.513838e+06
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## [236,] -2.387574e+11 -2.348103e+11 -5.113623e+14 -1.974096e+09
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## [238,] -6.143565e+06 -4.186354e+06 -4.235297e+10 -2.870066e+06
## [239,] -9.505006e+05 -3.804627e+05 -1.812858e+10 -3.436329e+06
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## [242,] -2.715191e+11 -2.193506e+11 -5.113623e+14 -2.390452e+09
## [243,] -4.590709e+09 -4.080936e+09 -8.527357e+12 -7.629532e+07
## [244,] -7.058847e+06 -3.051921e+06 -4.238336e+10 -2.882777e+06
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## [247,] -3.292955e+11 -2.899035e+11 -6.755454e+14 -2.715559e+09
## [248,] -2.606398e+11 -2.044167e+11 -5.117292e+14 -2.551646e+09
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```

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## [427,] -3.082298e+11 -2.898838e+11 -6.872219e+14 -3.199743e+09
## [428,] -2.622802e+11 -1.971312e+11 -5.205742e+14 -2.164180e+09
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## [619,] -3.030554e+11 -3.313943e+11 -6.999843e+14 -2.979982e+09
## [620,] -2.564763e+11 -2.269775e+11 -5.302418e+14 -1.941933e+09
## [621,] -4.358009e+09 -4.220916e+09 -8.848417e+12 -6.964456e+07
## [622,] -5.242848e+06 -4.025332e+06 -4.394758e+10 -3.006278e+06
## [623,] -6.762905e+05 -3.330233e+05 -1.881113e+10 -3.564819e+06
## [624,] -8.586307e+07 -7.870070e+07 -1.169750e+11 -8.258604e+06
## [625,] -3.303212e+11 -2.701380e+11 -7.004775e+14 -3.165867e+09
## [626,] -2.459058e+11 -2.269768e+11 -5.306154e+14 -2.223033e+09
## [627,] -4.112819e+09 -4.220916e+09 -8.848417e+12 -6.912147e+07
## [628,] -5.411450e+06 -4.969772e+06 -4.397854e+10 -2.996005e+06
## [629,] -8.823648e+05 -2.780034e+05 -1.882438e+10 -3.578833e+06
## [630,] -9.638236e+07 -8.085192e+07 -1.170574e+11 -8.112339e+06
## [631,] -3.281812e+11 -2.418548e+11 -7.009709e+14 -2.888943e+09
## [632,] -2.531989e+11 -2.043808e+11 -5.309891e+14 -2.132120e+09
## [633,] -4.180314e+09 -3.822877e+09 -8.854649e+12 -7.355389e+07
## [634,] -5.728240e+06 -4.022267e+06 -4.397854e+10 -3.182117e+06
## [635,] -5.163630e+05 -5.968292e+05 -1.882438e+10 -3.411918e+06
## [636,] -1.030735e+08 -7.871426e+07 -1.170574e+11 -8.456748e+06
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## [640,] -6.235119e+06 -3.443382e+06 -4.400950e+10 -2.993487e+06
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## [654,] -9.086952e+07 -8.089315e+07 -1.173048e+11 -8.673283e+06
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## [659,] -8.766319e+05 -5.921159e+05 -1.887743e+10 -3.547774e+06
## [660,] -8.593390e+07 -8.974687e+07 -1.173873e+11 -9.156572e+06
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## [665,] -9.501729e+05 -6.687707e+05 -1.889070e+10 -3.489905e+06
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## [673,] -3.133968e+11 -2.799072e+11 -7.039348e+14 -2.720656e+09
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## [717,] -4.332024e+09 -3.824295e+09 -8.948398e+12 -6.203300e+07
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## [813,] -4.305215e+09 -3.955513e+09 -8.992316e+12 -6.802582e+07
## [814,] -5.061498e+06 -5.935203e+06 -4.466229e+10 -2.925531e+06
## [815,] -5.564037e+05 -7.290619e+05 -1.911705e+10 -3.540455e+06
## [816,] -9.114653e+07 -9.229255e+07 -1.188774e+11 -8.263331e+06
## [817,] -3.009864e+11 -3.207300e+11 -7.118692e+14 -2.729109e+09
## [818,] -2.308409e+11 -2.117655e+11 -5.392446e+14 -2.093290e+09
## [819,] -4.346518e+09 -4.223200e+09 -8.992316e+12 -6.785328e+07
## [820,] -5.577378e+06 -3.664039e+06 -4.466229e+10 -3.083227e+06
## [821,] -5.924217e+05 -3.694207e+05 -1.913041e+10 -3.574798e+06
## [822,] -9.140438e+07 -8.335276e+07 -1.190435e+11 -8.486880e+06
## [823,] -3.186204e+11 -2.605173e+11 -7.128642e+14 -2.758240e+09
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## [835,] -3.228412e+11 -2.701165e+11 -7.138598e+14 -2.149828e+09
## [836,] -2.483047e+11 -1.829529e+11 -5.407525e+14 -2.251777e+09
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## [839,] -6.665978e+05 -3.666393e+05 -1.917051e+10 -3.603931e+06
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## [844,] -6.322430e+06 -3.939936e+06 -4.481843e+10 -3.099285e+06
## [845,] -7.129449e+05 -5.642285e+05 -1.919726e+10 -3.500591e+06
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## [849,] -4.347123e+09 -3.825523e+09 -9.030046e+12 -6.810147e+07
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## [1006,] -5.913925e+06 -4.147670e+06 -4.576095e+10 -3.148684e+06
## [1007,] -7.086672e+05 -3.385137e+05 -1.958732e+10 -3.705756e+06
## [1008,] -9.350011e+07 -8.163711e+07 -1.218017e+11 -8.529274e+06
## [1009,] -3.345691e+11 -2.798660e+11 -7.293807e+14 -2.785025e+09
## [1010,] -2.339427e+11 -2.426539e+11 -5.528911e+14 -1.973767e+09
## [1011,] -4.489407e+09 -3.959070e+09 -9.226243e+12 -6.711408e+07
## [1012,] -6.052387e+06 -4.450558e+06 -4.582414e+10 -3.212658e+06
## [1013,] -7.381461e+05 -3.951182e+05 -1.962789e+10 -3.712697e+06
## [1014,] -9.517178e+07 -7.952990e+07 -1.220540e+11 -8.577680e+06
## [1015,] -3.367262e+11 -2.999329e+11 -7.308916e+14 -2.854064e+09
## [1016,] -2.498982e+11 -2.117387e+11 -5.536542e+14 -2.017113e+09
## [1017,] -4.503649e+09 -4.227074e+09 -9.238973e+12 -6.799946e+07
## [1018,] -5.577522e+06 -3.550838e+06 -4.588737e+10 -3.180787e+06
## [1019,] -6.471027e+05 -2.310228e+05 -1.964143e+10 -3.732683e+06
## [1020,] -9.895930e+07 -8.607591e+07 -1.221381e+11 -8.352346e+06
## [1021,] -3.060883e+11 -3.102273e+11 -7.313956e+14 -2.735737e+09
## [1022,] -2.572490e+11 -2.347251e+11 -5.544179e+14 -1.995176e+09
## [1023,] -4.545994e+09 -3.828738e+09 -9.245341e+12 -6.922585e+07
## [1024,] -5.751381e+06 -3.547958e+06 -4.591900e+10 -3.194167e+06
## [1025,] -6.301999e+05 -4.571293e+05 -1.965497e+10 -3.741327e+06
## [1026,] -9.081650e+07 -8.609009e+07 -1.222223e+11 -8.481761e+06
## [1027,] -3.421535e+11 -2.510603e+11 -7.324041e+14 -2.794385e+09
## [1028,] -2.572482e+11 -2.117366e+11 -5.547999e+14 -2.046156e+09
## [1029,] -4.012317e+09 -4.092268e+09 -9.251712e+12 -6.923857e+07
## [1030,] -5.783532e+06 -3.831486e+06 -4.595064e+10 -3.277409e+06
## [1031,] -4.751377e+05 -6.752854e+05 -1.968206e+10 -3.749141e+06
## [1032,] -9.616793e+07 -8.611845e+07 -1.223908e+11 -8.365602e+06
## [1033,] -3.454314e+11 -2.999295e+11 -7.329086e+14 -2.487894e+09
## [1034,] -2.515198e+11 -2.192669e+11 -5.551821e+14 -1.901950e+09
## [1035,] -4.392271e+09 -3.959551e+09 -9.258085e+12 -7.403447e+07
## [1036,] -5.960547e+06 -3.267036e+06 -4.598229e+10 -3.367192e+06
## [1037,] -8.016405e+05 -3.912850e+05 -1.968206e+10 -3.675416e+06
## [1038,] -9.710901e+07 -8.173380e+07 -1.223908e+11 -8.793183e+06
## [1039,] -3.399754e+11 -2.999295e+11 -7.329086e+14 -3.077007e+09
## [1040,] -2.539658e+11 -2.117352e+11 -5.555643e+14 -1.966092e+09
## [1041,] -4.532200e+09 -3.959647e+09 -9.264460e+12 -7.084080e+07
## [1042,] -6.066532e+06 -5.423260e+06 -4.601395e+10 -3.213052e+06
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## [1043,] -7.053518e+05 -1.788147e+05 -1.970917e+10 -3.823820e+06
## [1044,] -9.386488e+07 -7.456918e+07 -1.225594e+11 -8.236501e+06
## [1045,] -3.324083e+11 -2.529294e+11 -7.339181e+14 -2.341212e+09
## [1046,] -2.572459e+11 -2.117345e+11 -5.559468e+14 -1.923101e+09
## [1047,] -4.546407e+09 -3.328516e+09 -9.270837e+12 -6.685899e+07
## [1048,] -5.736729e+06 -3.822517e+06 -4.604563e+10 -3.226501e+06
## [1049,] -5.429207e+05 -5.214491e+05 -1.970917e+10 -3.717133e+06
## [1050,] -9.432919e+07 -7.961170e+07 -1.225594e+11 -8.429943e+06
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## [1052,] -2.484463e+11 -2.133896e+11 -2.048385e+13 -1.396830e+09
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## [1054,] -1.712223e+07 -1.579129e+07 -1.696550e+09 -1.546563e+04
## [1055,] -7.255915e+06 -5.616426e+06 -7.261839e+08 -5.207855e+04
## [1056,] -5.913608e+07 -5.604873e+07 -4.515698e+09 -8.475128e+05
## [1057,] -3.280444e+11 -3.122257e+11 -2.704120e+13 -1.385796e+09
## [1058,] -2.428180e+11 -2.209497e+11 -2.048385e+13 -1.226526e+09
## [1059,] -3.970951e+09 -3.997377e+09 -3.415838e+11 -2.552816e+07
## [1060,] -1.837890e+07 -1.350935e+07 -1.696550e+09 -9.655681e+03
## [1061,] -6.916403e+06 -5.616426e+06 -7.261839e+08 -4.536906e+04
## [1062,] -5.551249e+07 -5.785480e+07 -4.515698e+09 -9.240790e+05
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## [1066,] -1.718401e+07 -1.350935e+07 -1.696550e+09 -1.010028e+04
## [1067,] -6.534767e+06 -6.335656e+06 -7.261839e+08 -4.391804e+04
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## [1097,] -9.474933e+05 -1.797336e+05 -1.977702e+10 -3.671473e+06
## [1098,] -1.024751e+08 -7.967989e+07 -1.229813e+11 -8.881903e+06
## [1099,] -3.871485e+11 -2.604806e+11 -7.364449e+14 -3.138758e+09
## [1100,] -2.402519e+11 -2.347177e+11 -5.582441e+14 -1.951259e+09
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## [1103,] -5.579552e+05 -3.836745e+05 -1.979061e+10 -3.774758e+06
## [1104,] -9.233690e+07 -7.969354e+07 -1.230658e+11 -8.442674e+06
## [1105,] -3.281182e+11 -2.798539e+11 -7.369508e+14 -2.590594e+09
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## [1108,] -5.822261e+06 -4.727496e+06 -4.623590e+10 -3.149660e+06
## [1109,] -6.652758e+05 -3.253075e+05 -1.979061e+10 -3.712114e+06
## [1110,] -9.653786e+07 -7.758481e+07 -1.231503e+11 -8.572784e+06
## [1111,] -3.249220e+11 -2.898007e+11 -7.374569e+14 -2.647752e+09
## [1112,] -2.506991e+11 -1.970620e+11 -5.590109e+14 -2.179597e+09
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## [1115,] -6.788568e+05 -2.701627e+05 -1.981780e+10 -3.786424e+06
## [1116,] -9.032228e+07 -8.188585e+07 -1.233194e+11 -8.539721e+06
## [1117,] -3.313257e+11 -2.798507e+11 -7.389761e+14 -3.107082e+09
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## [1120,] -5.453625e+06 -3.792696e+06 -4.636296e+10 -3.235203e+06
## [1121,] -4.749692e+05 -3.789560e+05 -1.985861e+10 -3.780075e+06
## [1122,] -9.126358e+07 -7.347836e+07 -1.234887e+11 -8.675074e+06
## [1123,] -3.323986e+11 -2.510496e+11 -7.394828e+14 -2.590205e+09
## [1124,] -2.490749e+11 -1.970600e+11 -5.601621e+14 -1.972478e+09
## [1125,] -4.661170e+09 -3.830156e+09 -9.341131e+12 -7.152536e+07
## [1126,] -5.205541e+06 -4.082566e+06 -4.642656e+10 -3.232653e+06
## [1127,] -6.982079e+05 -2.669947e+05 -1.987222e+10 -3.763987e+06
## [1128,] -9.357903e+07 -7.977542e+07 -1.235733e+11 -8.546127e+06
## [1129,] -3.509181e+11 -2.897966e+11 -7.399898e+14 -2.505452e+09
## [1130,] -2.498844e+11 -1.970593e+11 -5.605461e+14 -2.001335e+09
## [1131,] -4.491353e+09 -3.575531e+09 -9.347534e+12 -6.942945e+07
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## [1135,] -3.377919e+11 -2.604744e+11 -7.404969e+14 -2.599544e+09
## [1136,] -2.386581e+11 -2.347118e+11 -5.613145e+14 -2.001199e+09
## [1137,] -4.215360e+09 -4.093931e+09 -9.360348e+12 -6.841215e+07
## [1138,] -5.266811e+06 -5.029916e+06 -4.649020e+10 -3.251585e+06
## [1139,] -5.131174e+05 -5.061133e+05 -1.989946e+10 -3.800462e+06
## [1140,] -9.153622e+07 -7.980272e+07 -1.237427e+11 -8.408693e+06
## [1141,] -3.542367e+11 -3.756290e+11 -7.410041e+14 -2.922543e+09
## [1142,] -2.646930e+11 -2.192547e+11 -5.616989e+14 -1.865615e+09
## [1143,] -4.690216e+09 -4.094028e+09 -9.366758e+12 -6.585212e+07
## [1144,] -4.926665e+06 -4.073307e+06 -4.652204e+10 -3.243587e+06
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## [1147,] -3.421365e+11 -2.798458e+11 -7.420192e+14 -2.580339e+09
## [1148,] -2.605353e+11 -2.192540e+11 -5.620834e+14 -1.914922e+09
## [1149,] -4.477745e+09 -4.094126e+09 -9.373170e+12 -6.603451e+07
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## [1151,] -6.138320e+05 -3.742666e+05 -1.992672e+10 -3.794946e+06
## [1152,] -9.433424e+07 -8.198269e+07 -1.239122e+11 -8.803790e+06
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## [1157,] -4.174627e+05 -5.039412e+05 -1.992672e+10 -3.694321e+06
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```

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## [1161,] -4.690530e+09 -3.961475e+09 -9.386002e+12 -5.624559e+07
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## [1196,] -2.162188e+11 -2.043172e+11 -5.659359e+14 -2.140618e+09
## [1197,] -4.605839e+09 -4.792373e+09 -9.443851e+12 -7.262150e+07
## [1198,] -5.673797e+06 -3.187419e+06 -4.690493e+10 -3.282103e+06
## [1199,] -5.048529e+05 -9.502523e+04 -2.009067e+10 -3.744828e+06
## [1200,] -1.013803e+08 -9.335268e+07 -1.249317e+11 -9.254391e+06
## [1201,] -3.313098e+11 -3.101992e+11 -7.481243e+14 -2.801739e+09
## [1202,] -2.490611e+11 -2.347007e+11 -5.670943e+14 -1.885767e+09
## [1203,] -4.257727e+09 -3.962533e+09 -9.456730e+12 -7.372200e+07
## [1204,] -5.146434e+06 -4.651378e+06 -4.696890e+10 -3.276833e+06
## [1205,] -6.847626e+05 -1.645202e+05 -2.010436e+10 -3.858763e+06
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## [1207,] -2.927998e+11 -3.313081e+11 -7.491442e+14 -3.002374e+09
## [1208,] -2.315666e+11 -2.117134e+11 -5.674806e+14 -2.162911e+09
## [1209,] -4.068747e+09 -4.230552e+09 -9.463173e+12 -7.903994e+07
## [1210,] -5.910357e+06 -4.024106e+06 -4.703291e+10 -3.323029e+06
## [1211,] -6.903637e+05 -4.216797e+05 -2.013176e+10 -3.872489e+06
## [1212,] -8.928013e+07 -8.219038e+07 -1.251872e+11 -8.850568e+06
## [1213,] -3.388592e+11 -2.897801e+11 -7.501648e+14 -2.617101e+09
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## [1216,] -4.803562e+06 -4.968409e+06 -4.706494e+10 -3.231290e+06
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## [1221,] -4.217147e+09 -3.962821e+09 -9.476066e+12 -7.322301e+07
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## [1229,] -3.354265e+05 -5.564493e+05 -2.015918e+10 -3.683918e+06
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## [1233,] -4.764173e+09 -4.095887e+09 -9.488967e+12 -6.970989e+07
## [1234,] -5.895505e+06 -4.316175e+06 -4.716107e+10 -3.263744e+06
## [1235,] -5.614996e+05 -3.567133e+05 -2.018662e+10 -3.863285e+06
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## [1385,] -6.989989e+06 -5.382763e+06 -7.287890e+08 -4.611556e+04
## [1386,] -6.044328e+07 -4.912157e+07 -4.531898e+09 -9.049425e+05
## [1387,] -3.216691e+11 -2.817603e+11 -2.713821e+13 -1.624179e+09
## [1388,] -2.557766e+11 -2.059605e+11 -2.055733e+13 -1.009736e+09
## [1389,] -4.280237e+09 -3.485605e+09 -3.428092e+11 -2.099762e+07
## [1390,] -1.773856e+07 -1.405742e+07 -1.702636e+09 -1.660318e+04
```

```
## [1391,] -6.835213e+06 -5.157534e+06 -7.287890e+08 -5.310398e+04
## [1392,] -6.156484e+07 -5.081326e+07 -4.531898e+09 -8.140055e+05
## [1393,] -3.323278e+11 -2.623192e+11 -2.713821e+13 -1.646793e+09
## [1394,] -2.444187e+11 -2.059605e+11 -2.055733e+13 -1.249304e+09
## [1395,] -4.225632e+09 -3.485605e+09 -3.428092e+11 -2.118990e+07
## [1396,] -1.686996e+07 -1.519816e+07 -1.702636e+09 -1.641157e+04
## [1397,] -6.784007e+06 -5.157534e+06 -7.287890e+08 -5.355712e+04
## [1398,] -6.081599e+07 -5.253359e+07 -4.531898e+09 -8.183298e+05
## [1399,] -3.259118e+11 -2.817603e+11 -2.713821e+13 -1.358123e+09
## [1400,] -2.549568e+11 -1.986636e+11 -2.055733e+13 -1.237862e+09
## [1401,] -4.239251e+09 -3.363115e+09 -3.428092e+11 -2.553588e+07
## [1402,] -1.760673e+07 -1.405169e+07 -1.708734e+09 -1.584802e+04
## [1403,] -6.703600e+06 -5.379217e+06 -7.313989e+08 -5.232855e+04
## [1404,] -6.064139e+07 -5.082415e+07 -4.548127e+09 -8.305828e+05
## [1405,] -3.164041e+11 -2.917406e+11 -2.723539e+13 -1.484526e+09
## [1406,] -2.492541e+11 -1.914977e+11 -2.063095e+13 -1.243522e+09
## [1407,] -4.212135e+09 -3.485695e+09 -3.440368e+11 -2.715519e+07
## [1408,] -1.741309e+07 -1.349250e+07 -1.714842e+09 -5.324633e+03
## [1409,] -6.373565e+06 -5.840271e+06 -7.340133e+08 -4.467645e+04
## [1410,] -6.065330e+07 -5.255575e+07 -4.564384e+09 -9.124189e+05
## [1411,] -3.122508e+11 -3.101711e+11 -7.650421e+14 -2.769564e+09
## [1412,] -2.284318e+11 -2.346770e+11 -5.795233e+14 -2.464824e+09
## [1413,] -4.912644e+09 -4.098528e+09 -9.663995e+12 -8.266553e+07
## [1414,] -4.451590e+06 -5.204844e+06 -4.799833e+10 -3.346830e+06
## [1415,] -5.611332e+05 -2.791327e+05 -2.054499e+10 -3.785574e+06
## [1416,] -9.477025e+07 -8.260656e+07 -1.277569e+11 -9.030592e+06
## [1417,] -3.227527e+11 -2.798086e+11 -7.655577e+14 -2.898474e+09
## [1418,] -2.354621e+11 -2.192204e+11 -5.803046e+14 -1.612405e+09
## [1419,] -4.315951e+09 -3.706539e+09 -9.677023e+12 -7.025576e+07
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## [1423,] -3.091321e+11 -3.530836e+11 -7.660735e+14 -3.410968e+09
## [1424,] -2.747645e+11 -2.116895e+11 -5.806955e+14 -2.251933e+09
## [1425,] -4.767443e+09 -3.965997e+09 -9.690061e+12 -7.045698e+07
## [1426,] -4.661404e+06 -3.920545e+06 -4.812779e+10 -3.328023e+06
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## [1429,] -3.377457e+11 -2.897530e+11 -7.671056e+14 -2.838330e+09
## [1430,] -2.613250e+11 -2.268800e+11 -5.814776e+14 -2.213460e+09
## [1431,] -4.553210e+09 -3.835360e+09 -9.696583e+12 -7.011880e+07
## [1432,] -5.052425e+06 -3.627854e+06 -4.816018e+10 -3.355357e+06
## [1433,] -4.847085e+05 -2.260548e+05 -2.061427e+10 -3.960871e+06
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## [1435,] -3.080941e+11 -3.312764e+11 -7.676219e+14 -2.623983e+09
## [1436,] -2.555511e+11 -2.116874e+11 -5.818688e+14 -2.122745e+09
## [1437,] -4.482962e+09 -3.456397e+09 -9.703107e+12 -6.164042e+07
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## [1442,] -2.522803e+11 -2.192168e+11 -5.822602e+14 -1.947075e+09
## [1443,] -4.695764e+09 -3.707004e+09 -9.709633e+12 -7.297752e+07
## [1444,] -5.809582e+06 -3.076533e+06 -4.822500e+10 -3.360958e+06
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## [1446,] -9.232750e+07 -7.630323e+07 -1.283602e+11 -9.019591e+06
## [1447,] -3.143314e+11 -2.897505e+11 -7.686550e+14 -2.877946e+09
## [1448,] -2.547300e+11 -2.116860e+11 -5.826517e+14 -2.063230e+09
```

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## [1450,] -5.878003e+06 -3.073853e+06 -4.825743e+10 -3.290303e+06
## [1451,] -5.010811e+05 -3.254818e+05 -2.066978e+10 -3.971091e+06
## [1452,] -9.374203e+07 -8.273162e+07 -1.285329e+11 -8.942684e+06
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## [1454,] -2.474133e+11 -1.970199e+11 -5.830433e+14 -1.644708e+09
## [1455,] -4.582021e+09 -3.966574e+09 -9.729226e+12 -6.792157e+07
## [1456,] -5.272283e+06 -3.068496e+06 -4.832231e+10 -3.405056e+06
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## [1462,] -5.333943e+06 -3.896374e+06 -4.838724e+10 -3.438301e+06
## [1463,] -5.330564e+05 -5.117827e+05 -2.071146e+10 -4.003757e+06
## [1464,] -8.629384e+07 -9.171206e+07 -1.287920e+11 -8.749894e+06
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## [1468,] -4.406561e+06 -5.855793e+06 -4.845221e+10 -3.298825e+06
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## [1504,] -5.601369e+06 -3.293608e+06 -4.881033e+10 -3.480803e+06
## [1505,] -5.046140e+05 -2.593119e+05 -2.089256e+10 -4.004246e+06
## [1506,] -9.213200e+07 -8.737103e+07 -1.299182e+11 -8.858553e+06
```

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## [1517,] -6.658494e+05 -1.671340e+05 -2.093446e+10 -3.958578e+06
## [1518,] -9.286663e+07 -8.082994e+07 -1.301788e+11 -8.972287e+06
## [1519,] -3.301834e+11 -2.604143e+11 -7.800654e+14 -2.679686e+09
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## [1525,] -2.867294e+11 -3.870668e+11 -7.805860e+14 -3.141839e+09
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## [1575,] -4.292195e+09 -3.838579e+09 -9.919636e+12 -6.967818e+07
## [1576,] -5.656773e+06 -2.738934e+06 -4.926803e+10 -3.520836e+06
## [1577,] -5.033555e+05 -1.603320e+05 -2.108847e+10 -4.066937e+06
## [1578,] -9.349094e+07 -7.884177e+07 -1.311364e+11 -8.893777e+06
## [1579,] -3.301746e+11 -2.700053e+11 -7.852797e+14 -2.611787e+09
## [1580,] -2.473905e+11 -2.116642e+11 -5.948535e+14 -1.952079e+09
## [1581,] -4.430431e+09 -3.709982e+09 -9.919636e+12 -6.863373e+07
## [1582,] -5.137146e+06 -3.815349e+06 -4.926803e+10 -3.456757e+06
## [1583,] -6.364512e+05 -4.169296e+05 -2.108847e+10 -3.988176e+06
## [1584,] -9.074922e+07 -8.535995e+07 -1.312237e+11 -8.891197e+06
## [1585,] -3.227188e+11 -2.700045e+11 -7.858021e+14 -2.360841e+09
## [1586,] -2.449749e+11 -2.116635e+11 -5.952492e+14 -1.930568e+09
## [1587,] -4.585125e+09 -4.102442e+09 -9.926235e+12 -7.287192e+07
## [1588,] -6.009601e+06 -4.106068e+06 -4.933359e+10 -3.532178e+06
## [1589,] -5.582977e+05 -2.470097e+05 -2.111653e+10 -4.084993e+06
## [1590,] -9.773290e+07 -8.537407e+07 -1.313109e+11 -8.845858e+06
## [1591,] -3.237777e+11 -2.897225e+11 -7.863247e+14 -2.678737e+09
## [1592,] -2.514393e+11 -2.116621e+11 -5.960410e+14 -2.150196e+09
## [1593,] -4.528809e+09 -3.969655e+09 -9.939439e+12 -7.325591e+07
## [1594,] -4.959284e+06 -4.410669e+06 -4.936638e+10 -3.437576e+06
## [1595,] -5.633563e+05 -2.454929e+05 -2.114461e+10 -4.047630e+06
## [1596,] -9.147833e+07 -7.889606e+07 -1.314855e+11 -9.019509e+06
## [1597,] -3.366287e+11 -3.312430e+11 -7.873703e+14 -3.310088e+09
## [1598,] -2.747324e+11 -2.268523e+11 -5.964371e+14 -2.633495e+09
## [1599,] -4.543010e+09 -5.094974e+09 -9.946044e+12 -8.810782e+07
## [1600,] -6.950448e+06 -3.243873e+06 -4.939919e+10 -3.268318e+06
## [1601,] -5.487242e+05 -1.213140e+05 -2.114461e+10 -4.138941e+06
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## [1603,] -3.291009e+11 -2.797747e+11 -7.873703e+14 -2.554634e+09
## [1604,] -2.563432e+11 -1.969969e+11 -5.964371e+14 -1.901960e+09
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## [1609,] -2.642221e+11 -3.312430e+11 -7.873703e+14 -3.539127e+09
## [1610,] -2.449719e+11 -2.346444e+11 -5.968333e+14 -2.068102e+09
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## [1612,] -5.289984e+06 -3.515218e+06 -4.943201e+10 -3.509993e+06
## [1613,] -4.773948e+05 -2.447363e+05 -2.115866e+10 -4.074436e+06
## [1614,] -9.057955e+07 -7.890963e+07 -1.315729e+11 -9.009726e+06
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## [1621,] -3.333903e+11 -3.101328e+11 -7.884167e+14 -2.955341e+09
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## [1624,] -4.978907e+06 -4.397840e+06 -4.949768e+10 -3.498961e+06
## [1625,] -4.820734e+05 -4.752852e+05 -2.118677e+10 -3.939153e+06
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## [1631,] -5.503329e+05 -3.478243e+05 -2.121490e+10 -4.100681e+06
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## [1638,] -9.019713e+07 -8.996997e+07 -1.320101e+11 -8.946569e+06
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## [1643,] -4.857092e+05 -6.165890e+05 -2.122897e+10 -3.911303e+06
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## [1671,] -3.931625e+09 -4.239304e+09 -1.003875e+13 -6.834168e+07
## [1672,] -5.275091e+06 -3.202717e+06 -4.989260e+10 -3.564259e+06
## [1673,] -5.176596e+05 -2.342661e+05 -2.135581e+10 -4.201784e+06
## [1674,] -9.540122e+07 -8.124266e+07 -1.327989e+11 -8.966245e+06
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## [1680,] -8.675357e+07 -9.012950e+07 -1.329745e+11 -9.061646e+06
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## [1701,] -4.172419e+09 -3.841231e+09 -1.010523e+13 -7.091448e+07
## [1702,] -5.450485e+06 -4.330793e+06 -5.018983e+10 -3.584623e+06
## [1703,] -5.506277e+05 -2.276562e+05 -2.148303e+10 -4.125744e+06
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## [1708,] -5.446917e+06 -4.022880e+06 -5.022291e+10 -3.681355e+06
## [1709,] -4.523886e+05 -1.430770e+05 -2.149719e+10 -4.102972e+06
## [1710,] -9.791943e+07 -8.356777e+07 -1.337661e+11 -8.937776e+06
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## [1712,] -2.404234e+11 -2.209475e+11 -2.070470e+13 -1.249196e+09
## [1713,] -4.502366e+09 -3.866410e+09 -3.452666e+11 -2.793221e+07
## [1714,] -1.791459e+07 -1.637103e+07 -1.714842e+09 -1.134654e+04
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## [1720,] -1.829539e+07 -1.461054e+07 -1.714842e+09 -1.103107e+04
## [1721,] -6.674272e+06 -5.150595e+06 -7.340133e+08 -4.530073e+04
## [1722,] -5.752606e+07 -5.255575e+07 -4.564384e+09 -9.192900e+05
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## [1725,] -4.404582e+09 -3.610470e+09 -3.452666e+11 -2.450417e+07
## [1726,] -1.753780e+07 -1.518625e+07 -1.714842e+09 -1.072004e+04
## [1727,] -7.112138e+06 -5.605565e+06 -7.340133e+08 -4.741297e+04
## [1728,] -6.348135e+07 -5.255575e+07 -4.564384e+09 -9.055736e+05
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## [1730,] -2.500639e+11 -2.209475e+11 -2.070470e+13 -1.226365e+09
## [1731,] -4.225831e+09 -3.737344e+09 -3.452666e+11 -2.512984e+07
## [1732,] -1.643144e+07 -1.637103e+07 -1.714842e+09 -9.813663e+03
## [1733,] -6.776048e+06 -5.150595e+06 -7.340133e+08 -4.509216e+04
## [1734,] -6.102665e+07 -5.788968e+07 -4.564384e+09 -8.942220e+05
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```

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## [1751,] -4.943748e+05 -1.402012e+05 -2.156806e+10 -4.172401e+06
## [1752,] -8.897310e+07 -8.146322e+07 -1.342069e+11 -9.234940e+06
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## [1764,] -9.083194e+07 -8.367957e+07 -1.344718e+11 -9.870371e+06
## [1765,] -3.184652e+11 -2.699752e+11 -8.052526e+14 -2.783006e+09
## [1766,] -2.322677e+11 -2.505989e+11 -6.103837e+14 -2.065740e+09
## [1767,] -4.392680e+09 -4.378817e+09 -1.017861e+13 -6.826092e+07
## [1768,] -5.100080e+06 -3.989232e+06 -5.058750e+10 -3.554456e+06
## [1769,] -8.271544e+05 -1.029083e+05 -2.165325e+10 -4.225369e+06
## [1770,] -9.063308e+07 -9.501381e+07 -1.346485e+11 -9.455836e+06
## [1771,] -3.398489e+11 -2.998107e+11 -8.063107e+14 -3.013600e+09
## [1772,] -2.530405e+11 -2.116361e+11 -6.107846e+14 -2.316161e+09
## [1773,] -4.789943e+09 -3.829497e+09 -1.019199e+13 -7.143530e+07
## [1774,] -5.198152e+06 -3.693939e+06 -5.062071e+10 -3.602493e+06
## [1775,] -3.031569e+05 -3.195800e+05 -2.166747e+10 -4.152191e+06
## [1776,] -9.456267e+07 -8.154600e+07 -1.347369e+11 -9.067205e+06
## [1777,] -2.886881e+11 -3.101030e+11 -8.068401e+14 -2.842074e+09
## [1778,] -2.596105e+11 -2.042378e+11 -6.111855e+14 -1.927883e+09
## [1779,] -4.603457e+09 -3.587329e+09 -1.019199e+13 -7.647502e+07
## [1780,] -4.765453e+06 -3.693939e+06 -5.062071e+10 -3.571418e+06
## [1781,] -5.504463e+05 -1.024186e+05 -2.166747e+10 -4.184241e+06
## [1782,] -9.364883e+07 -7.941274e+07 -1.348253e+11 -9.144035e+06
## [1783,] -3.269325e+11 -2.797439e+11 -8.073696e+14 -2.523531e+09
## [1784,] -2.497851e+11 -1.828339e+11 -6.115866e+14 -2.207999e+09
## [1785,] -3.986714e+09 -4.660652e+09 -1.020537e+13 -6.693436e+07
## [1786,] -5.642388e+06 -3.407177e+06 -5.068716e+10 -3.565921e+06
## [1787,] -4.578115e+05 -1.350985e+05 -2.169591e+10 -4.172439e+06
## [1788,] -9.366362e+07 -7.942636e+07 -1.349137e+11 -9.163140e+06
## [1789,] -3.290667e+11 -2.699712e+11 -8.078992e+14 -2.822072e+09
## [1790,] -2.514086e+11 -2.116340e+11 -6.119879e+14 -2.124868e+09
## [1791,] -4.675058e+09 -4.241892e+09 -1.021206e+13 -7.984651e+07
## [1792,] -4.755450e+06 -4.280056e+06 -5.072041e+10 -3.636756e+06
## [1793,] -5.386949e+05 -1.339774e+05 -2.172437e+10 -4.222925e+06
## [1794,] -9.323046e+07 -8.377746e+07 -1.350907e+11 -9.252299e+06
## [1795,] -3.121791e+11 -3.205664e+11 -8.089591e+14 -2.542062e+09
## [1796,] -2.849979e+11 -2.042350e+11 -6.127908e+14 -2.347128e+09
```

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## [1797,] -4.603976e+09 -3.973797e+09 -1.022545e+13 -6.834934e+07
## [1798,] -4.555762e+06 -4.273735e+06 -5.078693e+10 -3.614174e+06
## [1799,] -5.593716e+05 -3.152748e+05 -2.173861e+10 -4.226066e+06
## [1800,] -9.255319e+07 -8.161502e+07 -1.351793e+11 -9.140809e+06
## [1801,] -3.344321e+11 -2.509462e+11 -8.094893e+14 -2.811936e+09
## [1802,] -2.425380e+11 -2.042343e+11 -6.131924e+14 -2.087431e+09
## [1803,] -4.421182e+09 -3.842936e+09 -1.022545e+13 -7.132300e+07
## [1804,] -5.666955e+06 -3.398720e+06 -5.078693e+10 -3.580226e+06
## [1805,] -5.232826e+05 -1.716627e+05 -2.173861e+10 -4.167776e+06
## [1806,] -9.347646e+07 -8.823024e+07 -1.351793e+11 -9.286098e+06
## [1807,] -3.322797e+11 -2.509462e+11 -8.094893e+14 -2.831739e+09
## [1808,] -2.579553e+11 -2.346133e+11 -6.135941e+14 -1.870921e+09
## [1809,] -4.393490e+09 -4.242191e+09 -1.023215e+13 -8.271859e+07
## [1810,] -5.211261e+06 -3.967894e+06 -5.082020e+10 -3.432274e+06
## [1811,] -8.263485e+05 -2.618082e+05 -2.175286e+10 -4.116970e+06
## [1812,] -1.098891e+08 -8.824459e+07 -1.352678e+11 -9.415183e+06
## [1813,] -3.195093e+11 -2.797391e+11 -8.105503e+14 -2.801898e+09
## [1814,] -2.338267e+11 -2.191588e+11 -6.143981e+14 -1.877812e+09
## [1815,] -4.352165e+09 -3.714545e+09 -1.024556e+13 -6.547608e+07
## [1816,] -5.136453e+06 -3.390273e+06 -5.088678e+10 -3.591733e+06
## [1817,] -5.270703e+05 -9.854332e+04 -2.178136e+10 -4.197218e+06
## [1818,] -9.399907e+07 -9.284247e+07 -1.355337e+11 -9.421908e+06
## [1819,] -3.121748e+11 -3.205621e+11 -8.116119e+14 -3.147235e+09
## [1820,] -2.433346e+11 -1.969657e+11 -6.148002e+14 -1.692730e+09
## [1821,] -4.228866e+09 -4.379929e+09 -1.025226e+13 -7.226162e+07
## [1822,] -4.800615e+06 -3.958766e+06 -5.092009e+10 -3.518680e+06
## [1823,] -7.188932e+05 -2.594676e+05 -2.179561e+10 -4.204372e+06
## [1824,] -9.966568e+07 -8.168407e+07 -1.356224e+11 -9.411910e+06
## [1825,] -3.247965e+11 -2.998015e+11 -8.121430e+14 -2.831333e+09
## [1826,] -2.473517e+11 -2.191574e+11 -6.152025e+14 -2.362428e+09
## [1827,] -4.533850e+09 -4.107436e+09 -1.026568e+13 -6.877192e+07
## [1828,] -5.539329e+06 -3.381836e+06 -5.098674e+10 -3.608923e+06
## [1829,] -4.820098e+05 -1.678846e+05 -2.182414e+10 -4.226764e+06
## [1830,] -9.614395e+07 -8.388941e+07 -1.357999e+11 -9.642957e+06
## [1831,] -3.485859e+11 -2.797351e+11 -8.132056e+14 -2.971725e+09
## [1832,] -2.538464e+11 -2.116262e+11 -6.164102e+14 -1.969978e+09
## [1833,] -4.394199e+09 -3.588519e+09 -1.027911e+13 -6.931913e+07
## [1834,] -5.673360e+06 -3.376217e+06 -5.105344e+10 -3.680252e+06
## [1835,] -6.254530e+05 -1.666345e+05 -2.185269e+10 -4.158689e+06
## [1836,] -9.405835e+07 -7.957625e+07 -1.358886e+11 -9.163316e+06
## [1837,] -2.886774e+11 -3.100919e+11 -8.137372e+14 -3.348701e+09
## [1838,] -2.571257e+11 -2.116255e+11 -6.168130e+14 -1.905638e+09
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## [1840,] -5.048441e+06 -3.511780e+06 -5.108680e+10 -3.648913e+06
## [1841,] -7.802207e+05 -5.637694e+05 -2.186697e+10 -4.181846e+06
## [1842,] -9.570508e+07 -8.835948e+07 -1.359774e+11 -9.138980e+06
## [1843,] -3.311981e+11 -3.205577e+11 -8.142690e+14 -2.588491e+09
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## [1845,] -4.548368e+09 -3.843883e+09 -1.029255e+13 -6.778462e+07
## [1846,] -5.385599e+06 -3.370603e+06 -5.112017e+10 -3.686118e+06
## [1847,] -3.288736e+05 -4.250607e+05 -2.188125e+10 -4.229246e+06
## [1848,] -9.832817e+07 -8.838822e+07 -1.361551e+11 -9.097621e+06
## [1849,] -3.279860e+11 -3.311964e+11 -8.153331e+14 -2.722803e+09
## [1850,] -2.457361e+11 -2.042267e+11 -6.176190e+14 -1.941078e+09
## [1851,] -4.464160e+09 -3.588794e+09 -1.029927e+13 -6.935731e+07
## [1852,] -5.008140e+06 -3.367798e+06 -5.115356e+10 -3.589463e+06
## [1853,] -5.603321e+05 -2.532772e+05 -2.190984e+10 -4.255751e+06
## [1854,] -9.411765e+07 -8.178078e+07 -1.362440e+11 -9.145606e+06
```

```
## [1855,] -3.258536e+11 -2.603613e+11 -8.158653e+14 -2.484996e+09
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## [1857,] -4.436435e+09 -3.715477e+09 -1.031272e+13 -7.255678e+07
## [1858,] -5.203450e+06 -3.641257e+06 -5.122036e+10 -3.677743e+06
## [1859,] -4.951058e+05 -2.056126e+05 -2.192414e+10 -4.250809e+06
## [1860,] -9.646880e+07 -8.179460e+07 -1.363329e+11 -9.324802e+06
## [1861,] -3.290526e+11 -2.997948e+11 -8.163978e+14 -2.810882e+09
## [1862,] -2.595965e+11 -1.969596e+11 -6.184256e+14 -1.976845e+09
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## [1864,] -5.440784e+06 -3.091562e+06 -5.125378e+10 -3.632187e+06
## [1865,] -5.865782e+05 -3.589073e+05 -2.195275e+10 -4.277381e+06
## [1866,] -9.673407e+07 -8.182225e+07 -1.365109e+11 -9.123296e+06
## [1867,] -3.100843e+11 -2.797270e+11 -8.185294e+14 -2.970892e+09
## [1868,] -2.579428e+11 -2.042226e+11 -6.200403e+14 -2.056709e+09
## [1869,] -4.605739e+09 -4.108514e+09 -1.033965e+13 -7.154259e+07
## [1870,] -4.220193e+06 -5.534870e+06 -5.135409e+10 -3.519574e+06
## [1871,] -4.897436e+05 -1.604544e+05 -2.199570e+10 -4.210021e+06
## [1872,] -9.443906e+07 -8.186373e+07 -1.367780e+11 -9.428815e+06
## [1873,] -3.387409e+11 -3.205491e+11 -8.195962e+14 -2.521765e+09
## [1874,] -2.595910e+11 -2.042205e+11 -6.212527e+14 -1.883721e+09
## [1875,] -4.041992e+09 -4.381548e+09 -1.035986e+13 -7.498589e+07
## [1876,] -5.044184e+06 -3.075460e+06 -5.145451e+10 -3.692553e+06
## [1877,] -4.539524e+05 -1.224878e+05 -2.202436e+10 -4.246569e+06
## [1878,] -9.586962e+07 -8.407148e+07 -1.369562e+11 -9.175367e+06
## [1879,] -3.301166e+11 -2.997889e+11 -8.201299e+14 -2.503003e+09
## [1880,] -2.409277e+11 -2.116178e+11 -6.212527e+14 -2.578965e+09
## [1881,] -3.975724e+09 -4.953319e+09 -1.035986e+13 -7.105105e+07
## [1882,] -5.074297e+06 -3.907242e+06 -5.148800e+10 -3.652604e+06
## [1883,] -8.796680e+05 -1.586232e+05 -2.203870e+10 -4.239612e+06
## [1884,] -9.401893e+07 -7.975358e+07 -1.370453e+11 -9.325595e+06
## [1885,] -3.496746e+11 -2.699521e+11 -8.206638e+14 -2.970559e+09
## [1886,] -2.489551e+11 -2.191453e+11 -6.220616e+14 -1.947490e+09
## [1887,] -4.606257e+09 -4.109003e+09 -1.037335e+13 -6.897485e+07
## [1888,] -4.970590e+06 -3.337018e+06 -5.152151e+10 -3.701297e+06
## [1889,] -5.062003e+05 -1.994231e+05 -2.205304e+10 -4.297501e+06
## [1890,] -9.589955e+07 -8.409950e+07 -1.371345e+11 -9.206400e+06
## [1891,] -3.279764e+11 -2.699513e+11 -8.211978e+14 -2.741410e+09
## [1892,] -2.571157e+11 -2.116164e+11 -6.220616e+14 -2.005187e+09
## [1893,] -4.648977e+09 -3.589801e+09 -1.037335e+13 -7.321033e+07
## [1894,] -4.637019e+06 -4.198245e+06 -5.158855e+10 -3.632886e+06
## [1895,] -5.986488e+05 -2.441318e+05 -2.208174e+10 -4.273362e+06
## [1896,] -9.710509e+07 -8.194671e+07 -1.373129e+11 -9.237485e+06
## [1897,] -3.607812e+11 -2.896666e+11 -8.222664e+14 -2.493380e+09
## [1898,] -2.369596e+11 -2.505752e+11 -6.228710e+14 -1.968892e+09
## [1899,] -4.749738e+09 -3.976205e+09 -1.039360e+13 -6.831909e+07
## [1900,] -5.332531e+06 -4.195114e+06 -5.162209e+10 -3.712997e+06
## [1901,] -5.240346e+05 -1.561979e+05 -2.209609e+10 -4.232000e+06
## [1902,] -9.386103e+07 -8.197438e+07 -1.374915e+11 -9.275911e+06
## [1903,] -3.507732e+11 -3.100766e+11 -8.233356e+14 -3.082938e+09
## [1904,] -2.546506e+11 -2.841105e+11 -6.236810e+14 -2.205845e+09
## [1905,] -4.564251e+09 -3.976398e+09 -1.040711e+13 -8.061849e+07
## [1906,] -4.920426e+06 -3.600544e+06 -5.168919e+10 -3.517464e+06
## [1907,] -8.348447e+05 -1.960253e+05 -2.212482e+10 -4.226180e+06
## [1908,] -8.952173e+07 -9.088555e+07 -1.375808e+11 -9.797945e+06
## [1909,] -3.398195e+11 -3.100758e+11 -8.238705e+14 -3.347021e+09
## [1910,] -2.433173e+11 -2.345941e+11 -6.240862e+14 -2.160293e+09
## [1911,] -4.493815e+09 -3.590259e+09 -1.040711e+13 -7.008584e+07
## [1912,] -5.087249e+06 -3.056728e+06 -5.168919e+10 -3.710265e+06
```

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## [1913,] -5.567229e+05 -1.953493e+05 -2.213918e+10 -4.281947e+06
## [1914,] -9.575503e+07 -8.418362e+07 -1.376702e+11 -9.292516e+06
## [1915,] -3.311814e+11 -2.603488e+11 -8.244056e+14 -2.799795e+09
## [1916,] -2.521989e+11 -2.116122e+11 -6.244915e+14 -1.954251e+09
## [1917,] -4.735744e+09 -3.976591e+09 -1.042063e+13 -7.258677e+07
## [1918,] -5.632518e+06 -3.051387e+06 -5.175634e+10 -3.587888e+06
## [1919,] -5.055698e+05 -7.802647e+04 -2.215356e+10 -4.379047e+06
## [1920,] -9.553591e+07 -7.710659e+07 -1.377596e+11 -9.007570e+06
## [1921,] -2.866607e+11 -3.100741e+11 -8.249408e+14 -2.701955e+09
## [1922,] -2.629009e+11 -1.969487e+11 -6.248970e+14 -2.313588e+09
## [1923,] -4.056187e+09 -4.522129e+09 -1.042063e+13 -7.240853e+07
## [1924,] -4.913648e+06 -4.182603e+06 -5.175634e+10 -3.590714e+06
## [1925,] -4.063402e+05 -1.537912e+05 -2.215356e+10 -4.236503e+06
## [1926,] -9.114303e+07 -8.640802e+07 -1.377596e+11 -9.495250e+06
## [1927,] -3.215966e+11 -2.896625e+11 -8.249408e+14 -2.809586e+09
## [1928,] -2.513833e+11 -2.345919e+11 -6.253025e+14 -2.305718e+09
## [1929,] -4.692731e+09 -3.845778e+09 -1.042740e+13 -6.907642e+07
## [1930,] -4.302343e+06 -5.144354e+06 -5.178993e+10 -3.509283e+06
## [1931,] -4.558490e+05 -1.166750e+05 -2.218232e+10 -4.309752e+06
## [1932,] -9.324049e+07 -8.867581e+07 -1.379384e+11 -9.255461e+06
## [1933,] -3.409034e+11 -2.997797e+11 -8.260118e+14 -2.819313e+09
## [1934,] -2.489483e+11 -1.969474e+11 -6.257083e+14 -1.579520e+09
## [1935,] -4.550532e+09 -3.717154e+09 -1.043416e+13 -6.463936e+07
## [1936,] -5.140888e+06 -2.791284e+06 -5.182354e+10 -3.622012e+06
## [1937,] -5.103842e+05 -2.388747e+05 -2.218232e+10 -4.307715e+06
## [1938,] -1.005421e+08 -8.422569e+07 -1.379384e+11 -9.519433e+06
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## [1940,] -2.401238e+11 -2.425147e+11 -6.257083e+14 -2.313441e+09
## [1941,] -4.177257e+09 -4.382661e+09 -1.043416e+13 -8.011033e+07
## [1942,] -6.021146e+06 -3.046050e+06 -5.182354e+10 -3.610666e+06
## [1943,] -7.593306e+05 -2.388747e+05 -2.218232e+10 -4.248862e+06
## [1944,] -9.791973e+07 -8.422569e+07 -1.379384e+11 -9.512051e+06
## [1945,] -3.269019e+11 -2.699442e+11 -8.260118e+14 -2.899047e+09
## [1946,] -2.441152e+11 -2.345911e+11 -6.257083e+14 -2.144956e+09
## [1947,] -4.678507e+09 -3.466287e+09 -1.043416e+13 -7.824771e+07
## [1948,] -6.021146e+06 -3.311939e+06 -5.182354e+10 -3.565459e+06
## [1949,] -4.964616e+05 -1.525949e+05 -2.218232e+10 -4.301608e+06
## [1950,] -1.000780e+08 -8.205743e+07 -1.380279e+11 -9.260111e+06
## [1951,] -3.018227e+11 -2.997781e+11 -8.270835e+14 -3.061682e+09
## [1952,] -2.489467e+11 -1.969460e+11 -6.265201e+14 -2.033593e+09
## [1953,] -4.794069e+09 -3.977073e+09 -1.045447e+13 -6.722604e+07
## [1954,] -5.543934e+06 -4.477035e+06 -5.192441e+10 -3.780039e+06
## [1955,] -5.354469e+05 -1.913175e+05 -2.222550e+10 -4.242136e+06
## [1956,] -1.005881e+08 -8.871899e+07 -1.382069e+11 -9.095363e+06
## [1957,] -3.354808e+11 -2.797132e+11 -8.276196e+14 -2.701558e+09
## [1958,] -2.497561e+11 -2.042108e+11 -6.269262e+14 -2.026215e+09
## [1959,] -4.765231e+09 -4.245576e+09 -1.046125e+13 -8.205023e+07
## [1960,] -5.575501e+06 -2.537895e+06 -5.195806e+10 -3.557291e+06
## [1961,] -3.811606e+05 -3.399379e+05 -2.225430e+10 -4.278823e+06
## [1962,] -9.400915e+07 -8.211281e+07 -1.383860e+11 -9.381065e+06
## [1963,] -3.247695e+11 -2.797116e+11 -8.286924e+14 -2.614910e+09
## [1964,] -2.417126e+11 -2.116066e+11 -6.277388e+14 -2.004229e+09
## [1965,] -4.327907e+09 -3.846347e+09 -1.046802e+13 -7.178840e+07
## [1966,] -5.089870e+06 -3.032728e+06 -5.199171e+10 -3.728161e+06
## [1967,] -4.120494e+05 -1.899830e+05 -2.225430e+10 -4.311357e+06
## [1968,] -9.493964e+07 -8.429583e+07 -1.383860e+11 -9.315209e+06
## [1969,] -3.365586e+11 -2.797108e+11 -8.292290e+14 -2.586315e+09
## [1970,] -2.481349e+11 -1.969433e+11 -6.281453e+14 -1.690656e+09
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## [1971,] -4.551151e+09 -3.717713e+09 -1.047480e+13 -7.521103e+07
## [1972,] -3.888414e+06 -5.120118e+06 -5.202538e+10 -3.693751e+06
## [1973,] -3.853424e+05 -1.886530e+05 -2.228313e+10 -4.317706e+06
## [1974,] -9.311274e+07 -9.567040e+07 -1.385653e+11 -9.715894e+06
## [1975,] -3.131880e+11 -2.896551e+11 -8.297658e+14 -3.745467e+09
## [1976,] -2.579265e+11 -2.345859e+11 -6.285519e+14 -2.062616e+09
## [1977,] -4.722294e+09 -3.846537e+09 -1.048158e+13 -8.228153e+07
## [1978,] -4.684132e+06 -3.853055e+06 -5.209275e+10 -3.754339e+06
## [1979,] -4.345991e+05 -2.329366e+05 -2.229755e+10 -4.347436e+06
## [1980,] -9.638896e+07 -7.999944e+07 -1.386550e+11 -9.248971e+06
## [1981,] -3.430755e+11 -2.896534e+11 -8.308399e+14 -2.759519e+09
## [1982,] -2.505629e+11 -2.116037e+11 -6.293656e+14 -1.910655e+09
## [1983,] -4.509192e+09 -3.846726e+09 -1.049515e+13 -6.920350e+07
## [1984,] -5.143522e+06 -3.562943e+06 -5.212645e+10 -3.739974e+06
## [1985,] -4.915420e+05 -1.860072e+05 -2.234084e+10 -4.348813e+06
## [1986,] -9.903655e+07 -8.438004e+07 -1.389242e+11 -9.233807e+06
## [1987,] -3.343950e+11 -2.997705e+11 -8.319148e+14 -2.798663e+09
## [1988,] -2.530036e+11 -2.267912e+11 -6.301798e+14 -2.391308e+09
## [1989,] -4.579955e+09 -3.718179e+09 -1.050873e+13 -7.710445e+07
## [1990,] -5.476633e+06 -4.138960e+06 -5.222762e+10 -3.783582e+06
## [1991,] -5.254295e+05 -2.299956e+05 -2.235528e+10 -4.362241e+06
## [1992,] -9.833848e+07 -8.439408e+07 -1.390140e+11 -9.384511e+06
## [1993,] -3.322418e+11 -2.699347e+11 -8.324524e+14 -3.133449e+09
## [1994,] -2.449076e+11 -2.042039e+11 -6.309945e+14 -2.320293e+09
## [1995,] -4.287493e+09 -4.111159e+09 -1.052231e+13 -7.439833e+07
## [1996,] -5.028819e+06 -3.011474e+06 -5.226136e+10 -3.918294e+06
## [1997,] -4.295762e+05 -1.099875e+05 -2.236972e+10 -4.456099e+06
## [1998,] -1.009972e+08 -7.795409e+07 -1.391936e+11 -1.021808e+07
## [1999,] -3.142252e+11 -2.896485e+11 -8.340665e+14 -3.122768e+09
## [2000,] -2.489368e+11 -2.115995e+11 -6.318097e+14 -1.967401e+09
## [2001,] -4.665765e+09 -4.111355e+09 -1.053591e+13 -7.771075e+07
## [2002,] -5.183528e+06 -3.539903e+06 -5.239645e+10 -3.637408e+06
## [2003,] -4.192023e+05 -7.813750e+04 -2.242755e+10 -4.339295e+06
## [2004,] -9.605436e+07 -8.012251e+07 -1.394633e+11 -9.488856e+06
## [2005,] -3.333126e+11 -2.997655e+11 -8.351434e+14 -2.661839e+09
## [2006,] -2.385230e+11 -2.115974e+11 -6.330336e+14 -2.032491e+09
## [2007,] -4.609058e+09 -3.592274e+09 -1.055632e+13 -7.683102e+07
## [2008,] -4.846128e+06 -3.262066e+06 -5.243025e+10 -3.763726e+06
## [2009,] -4.909208e+05 -7.771090e+04 -2.244201e+10 -4.277299e+06
## [2010,] -9.561570e+07 -7.592191e+07 -1.396433e+11 -9.572176e+06
## [2011,] -3.268853e+11 -2.797003e+11 -8.362210e+14 -2.454320e+09
## [2012,] -2.521821e+11 -2.041998e+11 -6.334418e+14 -1.924194e+09
## [2013,] -4.496171e+09 -4.111747e+09 -1.056313e+13 -7.357692e+07
## [2014,] -5.623527e+06 -3.531282e+06 -5.249788e+10 -3.740754e+06
## [2015,] -5.379773e+05 -2.241696e+05 -2.247096e+10 -4.383704e+06
## [2016,] -8.210367e+07 -9.586483e+07 -1.397333e+11 -9.807879e+06
## [2017,] -3.607564e+11 -2.896444e+11 -8.367601e+14 -2.807804e+09
## [2018,] -2.570932e+11 -1.969338e+11 -6.338501e+14 -2.288628e+09
## [2019,] -4.609370e+09 -4.111943e+09 -1.057675e+13 -6.883415e+07
## [2020,] -5.034853e+06 -3.253790e+06 -5.253171e+10 -3.732175e+06
## [2021,] -3.662137e+05 -1.403157e+05 -2.248544e+10 -4.325471e+06
## [2022,] -9.011064e+07 -9.823757e+07 -1.398233e+11 -9.782700e+06
## [2023,] -3.354649e+11 -3.205205e+11 -8.372993e+14 -2.978141e+09
## [2024,] -2.432984e+11 -2.587402e+11 -6.342586e+14 -2.288555e+09
## [2025,] -3.886917e+09 -3.978808e+09 -1.057675e+13 -1.051415e+08
## [2026,] -3.612966e+06 -3.814155e+06 -5.253171e+10 -3.279954e+06
## [2027,] -3.147259e+05 -1.403157e+05 -2.248544e+10 -4.264470e+06
## [2028,] -1.045018e+08 -8.673507e+07 -1.398233e+11 -9.589044e+06
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## [2029,] -2.987425e+11 -3.100545e+11 -8.372993e+14 -2.857325e+09
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## [2031,] -4.723765e+09 -4.247269e+09 -1.057675e+13 -7.632160e+07
## [2032,] -5.203589e+06 -2.990294e+06 -5.253171e+10 -3.769730e+06
## [2033,] -3.038136e+05 -2.722320e+05 -2.248544e+10 -4.242211e+06
## [2034,] -1.008642e+08 -8.673507e+07 -1.398233e+11 -9.589044e+06
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## [2036,] -2.513650e+11 -1.897981e+11 -6.350759e+14 -2.083663e+09
## [2037,] -4.695244e+09 -3.719297e+09 -1.059038e+13 -7.184413e+07
## [2038,] -5.542207e+06 -3.248279e+06 -5.259940e+10 -3.828017e+06
## [2039,] -4.586185e+05 -2.220041e+05 -2.251442e+10 -4.403598e+06
## [2040,] -9.219626e+07 -9.826787e+07 -1.400035e+11 -9.362707e+06
## [2041,] -3.464420e+11 -2.719513e+11 -2.733274e+13 -1.609067e+09
## [2042,] -2.484440e+11 -2.059591e+11 -2.070470e+13 -1.243468e+09
## [2043,] -4.171576e+09 -3.363293e+09 -3.452666e+11 -2.544563e+07
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## [2046,] -6.215357e+07 -5.788968e+07 -4.564384e+09 -9.055736e+05
## [2047,] -3.398905e+11 -2.528577e+11 -2.733274e+13 -1.624056e+09
## [2048,] -2.492533e+11 -2.059591e+11 -2.070470e+13 -1.237754e+09
## [2049,] -4.239450e+09 -3.610470e+09 -3.452666e+11 -2.512984e+07
## [2050,] -1.785151e+07 -1.577308e+07 -1.714842e+09 -1.118825e+04
## [2051,] -7.112138e+06 -5.375673e+06 -7.340133e+08 -4.613985e+04
## [2052,] -6.102665e+07 -5.972493e+07 -4.564384e+09 -9.078525e+05
## [2053,] -3.334015e+11 -2.917398e+11 -2.733274e+13 -1.594147e+09
## [2054,] -2.574187e+11 -2.286392e+11 -2.070470e+13 -1.203745e+09
## [2055,] -4.376841e+09 -3.610470e+09 -3.452666e+11 -2.471185e+07
## [2056,] -1.797778e+07 -1.637103e+07 -1.714842e+09 -1.118825e+04
## [2057,] -6.448092e+06 -6.079789e+06 -7.340133e+08 -4.509216e+04
## [2058,] -6.196504e+07 -5.255575e+07 -4.564384e+09 -9.078525e+05
## [2059,] -3.185037e+11 -3.122232e+11 -2.733274e+13 -1.646669e+09
## [2060,] -2.388350e+11 -2.133875e+11 -2.070470e+13 -1.260690e+09
## [2061,] -4.064117e+09 -3.737344e+09 -3.452666e+11 -2.534015e+07
## [2062,] -1.816801e+07 -1.295017e+07 -1.714842e+09 -1.056620e+04
## [2063,] -6.373565e+06 -6.324121e+06 -7.340133e+08 -4.550979e+04
## [2064,] -6.177679e+07 -5.788968e+07 -4.564384e+09 -8.987540e+05
## [2065,] -3.323260e+11 -3.018946e+11 -2.733274e+13 -1.609067e+09
## [2066,] -2.557751e+11 -2.209475e+11 -2.070470e+13 -1.215029e+09
## [2067,] -4.198660e+09 -3.737344e+09 -3.452666e+11 -2.481602e+07
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## [2074,] -4.507094e+06 -4.412595e+06 -5.259940e+10 -3.720799e+06
## [2075,] -4.259978e+05 -2.220041e+05 -2.251442e+10 -4.329788e+06
## [2076,] -9.475627e+07 -8.237615e+07 -1.400937e+11 -9.484949e+06
## [2077,] -3.354622e+11 -2.997597e+11 -8.389181e+14 -2.642090e+09
## [2078,] -2.337883e+11 -2.424966e+11 -6.354848e+14 -2.120784e+09
## [2079,] -4.524904e+09 -4.247667e+09 -1.060401e+13 -6.801893e+07
## [2080,] -5.021145e+06 -4.098639e+06 -5.266714e+10 -3.813582e+06
## [2081,] -4.699061e+05 -1.768941e+05 -2.254341e+10 -4.348418e+06
## [2082,] -9.878850e+07 -8.680625e+07 -1.402740e+11 -9.821610e+06
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## [2084,] -2.678926e+11 -2.041943e+11 -6.367122e+14 -2.429935e+09
## [2085,] -4.681330e+09 -3.979386e+09 -1.061766e+13 -7.296485e+07
## [2086,] -3.592660e+06 -4.396558e+06 -5.276883e+10 -3.776023e+06
```

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## [2089,] -3.079762e+11 -2.896378e+11 -8.410788e+14 -2.651365e+09
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## [2091,] -4.469062e+09 -3.848527e+09 -1.062449e+13 -6.979459e+07
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## [2093,] -4.792127e+05 -2.177047e+05 -2.260146e+10 -4.383743e+06
## [2094,] -9.436512e+07 -8.463292e+07 -1.405448e+11 -9.604678e+06
## [2095,] -3.142124e+11 -3.205128e+11 -8.421603e+14 -3.007982e+09
## [2096,] -2.353553e+11 -2.345689e+11 -6.379408e+14 -2.311236e+09
## [2097,] -4.483272e+09 -3.593373e+09 -1.063815e+13 -7.246844e+07
## [2098,] -5.070993e+06 -3.229027e+06 -5.283668e+10 -3.776166e+06
## [2099,] -6.004475e+05 -2.169922e+05 -2.261598e+10 -4.354124e+06
## [2100,] -9.368373e+07 -7.817013e+07 -1.406351e+11 -9.855799e+06
## [2101,] -3.507406e+11 -2.699196e+11 -8.427012e+14 -2.886473e+09
## [2102,] -2.369313e+11 -2.345682e+11 -6.383506e+14 -1.916281e+09
## [2103,] -4.855200e+09 -4.248265e+09 -1.064498e+13 -7.499792e+07
## [2104,] -4.080096e+06 -4.080096e+06 -5.287062e+10 -3.684053e+06
## [2105,] -5.246101e+05 -1.005685e+05 -2.264504e+10 -4.381017e+06
## [2106,] -9.911778e+07 -8.467511e+07 -1.408158e+11 -9.663479e+06
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## [2108,] -2.440910e+11 -2.041908e+11 -6.387605e+14 -1.973449e+09
## [2109,] -4.943325e+09 -3.979965e+09 -1.065866e+13 -7.684847e+07
## [2110,] -4.923952e+06 -4.070840e+06 -5.297251e+10 -3.590389e+06
## [2111,] -3.369861e+05 -1.329724e+05 -2.267412e+10 -4.307632e+06
## [2112,] -9.867218e+07 -8.692020e+07 -1.409966e+11 -9.598692e+06
## [2113,] -4.009918e+11 -2.603200e+11 -8.443252e+14 -3.354449e+09
## [2114,] -2.481136e+11 -2.115862e+11 -6.395807e+14 -2.248972e+09
## [2115,] -4.511861e+09 -4.113315e+09 -1.067234e+13 -7.761117e+07
## [2116,] -4.986958e+06 -2.953410e+06 -5.300649e+10 -3.834718e+06
## [2117,] -3.831446e+05 -9.911984e+04 -2.268867e+10 -4.417386e+06
## [2118,] -9.679450e+07 -8.693445e+07 -1.410871e+11 -9.932531e+06
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## [2121,] -4.526035e+09 -3.720509e+09 -1.067918e+13 -7.183510e+07
## [2122,] -5.425822e+06 -3.212570e+06 -5.304049e+10 -3.707345e+06
## [2123,] -4.574187e+05 -6.982733e+04 -2.271777e+10 -4.384690e+06
## [2124,] -9.217190e+07 -9.309327e+07 -1.412681e+11 -9.524064e+06
## [2125,] -3.290044e+11 -2.896304e+11 -8.459507e+14 -3.131311e+09
## [2126,] -2.628703e+11 -2.267722e+11 -6.408121e+14 -2.218086e+09
## [2127,] -4.540232e+09 -4.113511e+09 -1.068603e+13 -7.856305e+07
## [2128,] -5.046931e+06 -3.482628e+06 -5.307449e+10 -3.724668e+06
## [2129,] -3.111694e+05 -1.307526e+05 -2.273233e+10 -4.404348e+06
## [2130,] -9.543168e+07 -8.257045e+07 -1.413586e+11 -9.440334e+06
## [2131,] -3.110788e+11 -2.699140e+11 -8.464929e+14 -2.718180e+09
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## [2133,] -4.841476e+09 -3.720788e+09 -1.069973e+13 -7.583122e+07
## [2134,] -5.107262e+06 -3.476927e+06 -5.314254e+10 -3.873072e+06
## [2135,] -4.164955e+05 -1.373773e+05 -2.274690e+10 -4.438508e+06
## [2136,] -9.358524e+07 -8.389445e+07 -1.414492e+11 -9.452387e+06
## [2137,] -3.290027e+11 -2.708825e+11 -8.470353e+14 -2.593234e+09
## [2138,] -2.400946e+11 -2.115826e+11 -6.416336e+14 -2.195080e+09
## [2139,] -4.639815e+09 -4.113805e+09 -1.070658e+13 -7.170955e+07
## [2140,] -4.805036e+06 -3.201623e+06 -5.317658e+10 -3.823401e+06
## [2141,] -4.336928e+05 -2.092319e+05 -2.277604e+10 -4.379002e+06
## [2142,] -9.454335e+07 -8.480172e+07 -1.416304e+11 -9.661598e+06
## [2143,] -2.886248e+11 -3.205032e+11 -8.481205e+14 -3.364633e+09
## [2144,] -2.385058e+11 -2.670425e+11 -6.424557e+14 -2.279341e+09
```



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## [2145,] -4.498426e+09 -3.594381e+09 -1.071344e+13 -6.131615e+07
## [2146,] -4.704132e+06 -4.049284e+06 -5.321062e+10 -3.667597e+06
## [2147,] -4.790435e+05 -1.285515e+05 -2.279062e+10 -4.537598e+06
## [2148,] -9.432563e+07 -8.481580e+07 -1.417211e+11 -9.444411e+06
## [2149,] -3.268652e+11 -2.699109e+11 -8.486634e+14 -2.236035e+09
## [2150,] -2.620345e+11 -2.191081e+11 -6.432783e+14 -2.599531e+09
## [2151,] -4.470595e+09 -3.849950e+09 -1.072716e+13 -6.963644e+07
## [2152,] -4.959692e+06 -3.465537e+06 -5.327876e+10 -3.864559e+06
## [2153,] -4.381527e+05 -9.530810e+04 -2.280520e+10 -4.436917e+06
## [2154,] -9.597469e+07 -8.263990e+07 -1.418118e+11 -9.515435e+06
## [2155,] -3.300692e+11 -2.796809e+11 -8.492065e+14 -2.659790e+09
## [2156,] -2.432811e+11 -2.115791e+11 -6.436898e+14 -1.958250e+09
## [2157,] -4.456814e+09 -3.721348e+09 -1.074088e+13 -6.983677e+07
## [2158,] -5.393831e+06 -3.459850e+06 -5.334693e+10 -3.841281e+06
## [2159,] -4.624350e+05 -9.436684e+04 -2.283439e+10 -4.453705e+06
## [2160,] -1.017151e+08 -8.707700e+07 -1.419932e+11 -9.852633e+06
## [2161,] -3.236725e+11 -2.796785e+11 -8.508367e+14 -2.688470e+09
## [2162,] -2.392951e+11 -1.969162e+11 -6.445132e+14 -2.045209e+09
## [2163,] -4.512990e+09 -3.594839e+09 -1.074775e+13 -7.160998e+07
## [2164,] -4.752384e+06 -3.457007e+06 -5.338103e+10 -3.835508e+06
## [2165,] -3.718770e+05 -3.035441e+05 -2.286359e+10 -4.458086e+06
## [2166,] -9.231869e+07 -9.626927e+07 -1.421748e+11 -9.445829e+06
## [2167,] -3.376045e+11 -2.603098e+11 -8.513804e+14 -2.805618e+09
## [2168,] -2.472947e+11 -1.969141e+11 -6.457493e+14 -1.965097e+09
## [2169,] -4.499246e+09 -3.595114e+09 -1.076836e+13 -7.559991e+07
## [2170,] -4.329521e+06 -3.448488e+06 -5.348341e+10 -3.806566e+06
## [2171,] -5.403338e+05 -3.010234e+05 -2.290742e+10 -4.383148e+06
## [2172,] -9.445926e+07 -8.275109e+07 -1.425383e+11 -9.516237e+06
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## [2175,] -4.683839e+09 -3.850708e+09 -1.078212e+13 -7.417719e+07
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## [2177,] -4.551888e+05 -2.480742e+05 -2.293667e+10 -4.488774e+06
## [2178,] -1.074532e+08 -8.942575e+07 -1.426292e+11 -9.751254e+06
## [2179,] -3.058905e+11 -2.997362e+11 -8.541018e+14 -2.955255e+09
## [2180,] -2.361267e+11 -2.115735e+11 -6.469865e+14 -2.089048e+09
## [2181,] -4.570035e+09 -3.981797e+09 -1.078900e+13 -8.233573e+07
## [2182,] -5.028956e+06 -2.908929e+06 -5.358589e+10 -3.874011e+06
## [2183,] -7.930432e+05 -4.150660e+04 -2.293667e+10 -4.379277e+06
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## [2187,] -4.388024e+09 -3.722094e+09 -1.079588e+13 -7.492654e+07
## [2188,] -4.761584e+06 -3.719243e+06 -5.362007e+10 -3.874083e+06
## [2189,] -3.603921e+05 -1.225948e+05 -2.295130e+10 -4.467093e+06
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## [2191,] -3.311322e+11 -3.419452e+11 -8.546466e+14 -3.213925e+09
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## [2199,] -4.584507e+09 -3.851088e+09 -1.080965e+13 -7.013974e+07
## [2200,] -4.754916e+06 -3.713350e+06 -5.368846e+10 -4.019423e+06
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## [2204,] -2.537856e+11 -1.827745e+11 -6.486381e+14 -2.008005e+09
## [2205,] -4.598899e+09 -4.250855e+09 -1.082343e+13 -8.259522e+07
## [2206,] -4.491792e+06 -5.282535e+06 -5.375690e+10 -3.680158e+06
## [2207,] -3.168901e+05 -2.442829e+05 -2.300987e+10 -4.378842e+06
## [2208,] -8.973905e+07 -8.951248e+07 -1.431755e+11 -1.014246e+07
## [2209,] -3.300560e+11 -2.698981e+11 -8.573732e+14 -2.563365e+09
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## [2213,] -9.019675e+05 -6.160439e+04 -2.302452e+10 -4.394372e+06
## [2214,] -9.810159e+07 -8.286234e+07 -1.432667e+11 -9.406612e+06
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## [2218,] -5.200243e+06 -3.414516e+06 -5.389390e+10 -3.927690e+06
## [2219,] -1.998465e+05 -4.075101e+05 -2.306851e+10 -4.480502e+06
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## [2259,] -4.685722e+09 -4.252051e+09 -1.090628e+13 -7.387357e+07
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## [2273,] -1.894504e+05 -6.851167e+05 -2.320073e+10 -4.373196e+06
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## [2277,] -4.293600e+09 -3.983919e+09 -1.094090e+13 -8.668559e+07
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## [2284,] -3.824788e+06 -3.942363e+06 -5.440922e+10 -3.869873e+06
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## [2301,] -4.672344e+09 -3.597772e+09 -1.096864e+13 -7.745254e+07
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## [2303,] -5.152653e+05 -5.389646e+04 -2.333332e+10 -4.553564e+06
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## [2305,] -3.529084e+11 -2.508620e+11 -8.688722e+14 -2.724635e+09
## [2306,] -2.448577e+11 -2.041584e+11 -6.581752e+14 -2.109457e+09
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## [2308,] -4.543896e+06 -3.093175e+06 -5.454705e+10 -3.932029e+06
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```

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## [2324,] -2.603450e+11 -2.190794e+11 -6.598410e+14 -2.441725e+09
## [2325,] -4.502835e+09 -3.724985e+09 -1.101030e+13 -8.780595e+07
## [2326,] -4.723377e+06 -2.826117e+06 -5.468506e+10 -3.627878e+06
## [2327,] -4.091507e+05 -3.260052e+05 -2.342193e+10 -4.497929e+06
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## [2330,] -2.432494e+11 -2.115496e+11 -6.610916e+14 -2.020509e+09
## [2331,] -4.616116e+09 -3.985076e+09 -1.102421e+13 -7.904200e+07
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## [2339,] -4.019294e+05 -1.398581e+05 -2.343672e+10 -4.572224e+06
## [2340,] -9.710570e+07 -8.325233e+07 -1.458307e+11 -9.709074e+06
## [2341,] -3.343278e+11 -2.895893e+11 -8.732730e+14 -2.832062e+09
## [2342,] -2.472658e+11 -1.968884e+11 -6.615088e+14 -2.168919e+09
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## [2344,] -4.778406e+06 -2.818415e+06 -5.478867e+10 -3.959204e+06
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## [2347,] -3.257603e+11 -2.796445e+11 -8.738238e+14 -3.360467e+09
## [2348,] -2.432479e+11 -2.345260e+11 -6.619261e+14 -2.497781e+09
## [2349,] -4.587923e+09 -3.854218e+09 -1.103812e+13 -8.379105e+07
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## [2352,] -1.040811e+08 -8.590755e+07 -1.459227e+11 -9.743696e+06
## [2353,] -3.765368e+11 -2.905924e+11 -8.738238e+14 -2.861817e+09
## [2354,] -2.661670e+11 -2.115475e+11 -6.623435e+14 -1.814367e+09
## [2355,] -4.267708e+09 -3.985366e+09 -1.104508e+13 -8.592622e+07
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## [2359,] -3.408222e+11 -2.602755e+11 -8.754775e+14 -2.551389e+09
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## [2362,] -5.129944e+06 -4.508132e+06 -5.492699e+10 -4.019080e+06
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## [2365,] -3.484821e+11 -2.895860e+11 -8.754775e+14 -2.541982e+09
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## [2367,] -5.618749e+09 -4.391872e+09 -1.105901e+13 -9.490960e+07
## [2368,] -4.761717e+06 -3.605185e+06 -5.496159e+10 -3.859297e+06
## [2369,] -4.737061e+05 -2.185612e+05 -2.352552e+10 -4.537351e+06
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## [2371,] -3.301804e+11 -2.719513e+11 -2.733274e+13 -1.654242e+09
## [2372,] -2.565962e+11 -2.209475e+11 -2.070470e+13 -1.220690e+09
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## [2374,] -1.747539e+07 -1.349250e+07 -1.714842e+09 -9.961945e+03
## [2375,] -6.699644e+06 -5.605565e+06 -7.340133e+08 -4.530073e+04
## [2376,] -6.348135e+07 -4.914299e+07 -4.564384e+09 -9.124189e+05
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## [2378,] -2.607217e+11 -2.133875e+11 -2.070470e+13 -1.203745e+09
## [2379,] -4.376841e+09 -3.737344e+09 -3.452666e+11 -2.440066e+07
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## [2395,] -3.420674e+11 -2.623176e+11 -2.733274e+13 -1.609067e+09
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## [2483,] -4.626429e+05 -2.535850e+05 -2.377804e+10 -4.580253e+06
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## [2487,] -4.576133e+09 -3.476282e+09 -1.119878e+13 -7.033070e+07
## [2488,] -4.666288e+06 -3.010413e+06 -5.562116e+10 -3.987718e+06
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```

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## [2529,] -4.394911e+09 -4.121749e+09 -1.126899e+13 -8.774737e+07
## [2530,] -4.348877e+06 -2.983955e+06 -5.596988e+10 -4.081331e+06
## [2531,] -2.953486e+05 -8.890849e+04 -2.395710e+10 -4.697942e+06
## [2532,] -8.974427e+07 -9.738209e+07 -1.489747e+11 -9.931905e+06
## [2533,] -3.386226e+11 -2.996785e+11 -8.921001e+14 -3.061933e+09
## [2534,] -2.831439e+11 -2.267111e+11 -6.757705e+14 -2.136400e+09
## [2535,] -5.116159e+09 -3.988454e+09 -1.126899e+13 -7.619380e+07
## [2536,] -5.646600e+06 -2.490883e+06 -5.596988e+10 -3.976544e+06
## [2537,] -5.991219e+05 -2.444340e+05 -2.395710e+10 -4.647042e+06
## [2538,] -1.038632e+08 -9.042573e+07 -1.489747e+11 -1.009853e+07
## [2539,] -2.996785e+11 -3.204340e+11 -8.921001e+14 -3.186956e+09
## [2540,] -2.392390e+11 -2.115250e+11 -6.757705e+14 -2.003556e+09
## [2541,] -4.506733e+09 -3.988550e+09 -1.127602e+13 -7.313228e+07
## [2542,] -4.630044e+06 -2.981315e+06 -5.600481e+10 -4.057333e+06
## [2543,] -3.981597e+05 -6.168028e+04 -2.397205e+10 -4.694875e+06
## [2544,] -9.411854e+07 -8.594551e+07 -1.490677e+11 -9.570493e+06
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## [2546,] -2.456285e+11 -1.968646e+11 -6.761922e+14 -1.924405e+09
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## [2548,] -5.053250e+06 -2.726807e+06 -5.603976e+10 -4.027418e+06
## [2549,] -3.550904e+05 -8.799947e+04 -2.398701e+10 -4.649401e+06
## [2550,] -9.764861e+07 -7.943180e+07 -1.491607e+11 -1.040718e+07
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## [2552,] -2.537333e+11 -2.267089e+11 -6.770362e+14 -1.867759e+09
## [2553,] -4.271203e+09 -4.257534e+09 -1.129010e+13 -7.137894e+07
## [2554,] -4.559547e+06 -3.798055e+06 -5.607471e+10 -3.970817e+06
## [2555,] -4.277152e+05 -2.928622e+05 -2.400197e+10 -4.612573e+06
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## [2560,] -4.681222e+06 -2.478837e+06 -5.614465e+10 -4.036624e+06
## [2561,] -3.182854e+05 -2.406707e+05 -2.403191e+10 -4.720912e+06
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## [2563,] -3.183229e+11 -2.602482e+11 -8.948857e+14 -2.838814e+09
## [2564,] -2.553688e+11 -2.504734e+11 -6.778806e+14 -2.181272e+09
## [2565,] -4.865322e+09 -3.857824e+09 -1.130418e+13 -7.921337e+07
## [2566,] -4.681222e+06 -4.713550e+06 -5.614465e+10 -3.985839e+06
## [2567,] -4.852833e+05 -2.406707e+05 -2.403191e+10 -4.657175e+06
## [2568,] -1.044297e+08 -8.379705e+07 -1.494399e+11 -1.011522e+07
## [2569,] -3.429698e+11 -2.508252e+11 -8.954434e+14 -2.989656e+09
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## [2571,] -4.620374e+09 -3.728996e+09 -1.131122e+13 -7.141768e+07
## [2572,] -3.935690e+06 -3.504338e+06 -5.617964e+10 -4.036698e+06
## [2573,] -3.010569e+05 -2.903864e+05 -2.404689e+10 -4.666830e+06
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## [2578,] -4.451590e+06 -3.227928e+06 -5.621463e+10 -4.072814e+06
## [2579,] -2.782936e+05 -1.929252e+05 -2.407685e+10 -4.671314e+06
## [2580,] -9.540242e+07 -8.605890e+07 -1.498126e+11 -1.003586e+07
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## [2604,] -1.006911e+08 -8.836523e+07 -1.502790e+11 -9.841152e+06
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## [2608,] -4.208899e+06 -3.478637e+06 -5.649501e+10 -3.986571e+06
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## [2623,] -3.342792e+11 -2.895440e+11 -9.038290e+14 -2.585224e+09
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## [2631,] -4.636383e+09 -3.990674e+09 -1.143131e+13 -7.234785e+07
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## [2640,] -1.018082e+08 -9.306939e+07 -1.512142e+11 -1.026904e+07
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## [2644,] -5.004447e+06 -2.666576e+06 -5.688166e+10 -4.146799e+06
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## [2656,] -4.195615e+06 -3.167804e+06 -5.698733e+10 -3.919384e+06
## [2657,] -3.716161e+05 -1.399724e+05 -2.439261e+10 -4.807394e+06
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## [2659,] -3.099439e+11 -3.099439e+11 -9.088791e+14 -2.641695e+09
## [2660,] -2.594649e+11 -2.115039e+11 -6.884806e+14 -2.037959e+09
## [2661,] -4.608646e+09 -3.860198e+09 -1.148094e+13 -7.172798e+07
## [2662,] -4.598922e+06 -4.315540e+06 -5.702258e+10 -4.223384e+06
## [2663,] -3.357098e+05 -5.116469e+04 -2.440770e+10 -4.804292e+06
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## [2700,] -1.062224e+08 -9.332020e+07 -1.528106e+11 -1.025260e+07
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## [2702,] -2.541360e+11 -1.914964e+11 -2.077858e+13 -1.209327e+09
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## [2719,] -3.388019e+11 -3.227229e+11 -2.762586e+13 -1.586531e+09
## [2720,] -2.657133e+11 -2.059570e+11 -2.092673e+13 -1.056417e+09
## [2721,] -4.335695e+09 -3.363559e+09 -3.489692e+11 -2.200361e+07
## [2722,] -1.569573e+07 -1.696123e+07 -1.733231e+09 -1.457876e+04
## [2723,] -6.511348e+06 -6.561517e+06 -7.418847e+08 -5.238030e+04
## [2724,] -6.106247e+07 -5.976037e+07 -4.613332e+09 -8.449401e+05
```

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## [2725,] -3.475373e+11 -2.817562e+11 -2.762586e+13 -1.392401e+09
## [2726,] -2.508728e+11 -2.059563e+11 -2.100100e+13 -1.348351e+09
## [2727,] -4.253489e+09 -3.363647e+09 -3.502078e+11 -2.654400e+07
## [2728,] -1.795187e+07 -1.347006e+07 -1.739383e+09 -9.828199e+03
## [2729,] -6.633195e+06 -5.361509e+06 -7.445179e+08 -4.746223e+04
## [2730,] -6.107441e+07 -4.918585e+07 -4.629706e+09 -9.114003e+05
## [2731,] -3.539411e+11 -3.418478e+11 -9.150705e+14 -2.875727e+09
## [2732,] -2.569832e+11 -2.423928e+11 -6.931707e+14 -2.224375e+09
## [2733,] -4.412961e+09 -3.605476e+09 -1.155915e+13 -8.120586e+07
## [2734,] -4.752784e+06 -3.402102e+06 -5.744641e+10 -4.248849e+06
## [2735,] -3.596035e+05 -1.707773e+05 -2.458911e+10 -4.861865e+06
## [2736,] -9.944335e+07 -8.652739e+07 -1.529048e+11 -9.968292e+06
## [2737,] -3.310354e+11 -2.602194e+11 -9.156344e+14 -2.564678e+09
## [2738,] -2.545211e+11 -1.968368e+11 -6.935978e+14 -1.893316e+09
## [2739,] -4.539102e+09 -3.861337e+09 -1.156627e+13 -6.228822e+07
## [2740,] -4.913377e+06 -2.871516e+06 -5.748180e+10 -4.190708e+06
## [2741,] -2.863650e+05 -4.676962e+04 -2.460426e+10 -4.899924e+06
## [2742,] -9.661506e+07 -8.432951e+07 -1.529990e+11 -9.815031e+06
## [2743,] -3.214528e+11 -2.795831e+11 -9.161985e+14 -2.352085e+09
## [2744,] -2.496331e+11 -2.040997e+11 -6.940251e+14 -1.816396e+09
## [2745,] -4.553320e+09 -3.605659e+09 -1.157340e+13 -7.171896e+07
## [2746,] -6.138717e+06 -4.588310e+06 -5.748180e+10 -4.081504e+06
## [2747,] -2.961299e+05 -1.695166e+05 -2.461941e+10 -4.799577e+06
## [2748,] -9.686549e+07 -8.434354e+07 -1.530932e+11 -1.016021e+07
## [2749,] -3.440283e+11 -2.698132e+11 -9.167627e+14 -2.679048e+09
## [2750,] -2.423905e+11 -2.040990e+11 -6.944525e+14 -2.022375e+09
## [2751,] -4.497097e+09 -3.605751e+09 -1.158053e+13 -7.297830e+07
## [2752,] -4.873620e+06 -3.393650e+06 -5.755261e+10 -4.181703e+06
## [2753,] -4.052888e+05 -2.116155e+05 -2.463457e+10 -4.779302e+06
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## [2755,] -3.353365e+11 -2.895243e+11 -9.173272e+14 -2.966060e+09
## [2756,] -2.431891e+11 -2.190201e+11 -6.948801e+14 -1.971559e+09
## [2757,] -4.782337e+09 -4.126165e+09 -1.158766e+13 -7.588083e+07
## [2758,] -5.660408e+06 -3.673992e+06 -5.755261e+10 -4.130010e+06
## [2759,] -4.436325e+05 -1.309737e+05 -2.463457e+10 -4.783593e+06
## [2760,] -9.877422e+07 -9.337926e+07 -1.531875e+11 -1.048033e+07
## [2761,] -3.078592e+11 -2.895243e+11 -9.173272e+14 -2.746929e+09
## [2762,] -2.611078e+11 -2.266776e+11 -6.953078e+14 -2.239343e+09
## [2763,] -4.399573e+09 -3.732730e+09 -1.159479e+13 -7.264714e+07
## [2764,] -4.234145e+06 -3.121732e+06 -5.758803e+10 -4.148293e+06
## [2765,] -3.443360e+05 -6.918270e+04 -2.464973e+10 -4.806275e+06
## [2766,] -9.878941e+07 -8.437162e+07 -1.532817e+11 -1.039249e+07
## [2767,] -3.182875e+11 -2.795807e+11 -9.178917e+14 -3.109800e+09
## [2768,] -2.488209e+11 -2.190194e+11 -6.953078e+14 -2.293405e+09
## [2769,] -4.371848e+09 -3.861717e+09 -1.159479e+13 -7.571189e+07
## [2770,] -4.575224e+06 -2.614425e+06 -5.762347e+10 -4.240008e+06
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## [2772,] -9.787043e+07 -8.439970e+07 -1.534704e+11 -1.001998e+07
## [2773,] -3.256896e+11 -2.795791e+11 -9.190215e+14 -2.564214e+09
## [2774,] -2.472035e+11 -2.114913e+11 -6.961635e+14 -1.914151e+09
## [2775,] -4.469474e+09 -3.732917e+09 -1.160906e+13 -7.483036e+07
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## [2778,] -9.835970e+07 -8.222918e+07 -1.535648e+11 -1.026877e+07
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## [2780,] -2.423867e+11 -1.968321e+11 -6.965916e+14 -2.029333e+09
## [2781,] -4.553938e+09 -3.606210e+09 -1.161620e+13 -7.358129e+07
## [2782,] -5.259237e+06 -3.659360e+06 -5.772983e+10 -4.169885e+06
```

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## [2783,] -3.350548e+05 -9.549691e+04 -2.471042e+10 -4.774559e+06
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## [2785,] -3.331759e+11 -3.099260e+11 -9.207173e+14 -2.945294e+09
## [2786,] -2.512508e+11 -2.040941e+11 -6.974482e+14 -2.269793e+09
## [2787,] -4.525936e+09 -3.606394e+09 -1.163048e+13 -7.632605e+07
## [2788,] -4.245977e+06 -2.602084e+06 -5.780080e+10 -4.200550e+06
## [2789,] -2.948173e+05 -1.271308e+05 -2.474080e+10 -4.822089e+06
## [2790,] -9.675030e+07 -8.445587e+07 -1.538481e+11 -1.010010e+07
## [2791,] -3.203882e+11 -2.895177e+11 -9.218488e+14 -3.078100e+09
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## [2795,] -1.795263e+05 -4.216797e+05 -2.477119e+10 -4.710949e+06
## [2796,] -9.168455e+07 -9.122679e+07 -1.541316e+11 -1.024448e+07
## [2797,] -3.182798e+11 -2.698045e+11 -9.229809e+14 -2.805049e+09
## [2798,] -2.586190e+11 -2.344601e+11 -6.995918e+14 -1.836346e+09
## [2799,] -4.317664e+09 -3.993860e+09 -1.166623e+13 -7.529901e+07
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## [2801,] -4.133650e+05 -1.249605e+05 -2.480161e+10 -4.738920e+06
## [2802,] -9.728198e+07 -9.587081e+07 -1.542262e+11 -1.066730e+07
## [2803,] -2.996308e+11 -3.203847e+11 -9.241138e+14 -3.140120e+09
## [2804,] -2.415827e+11 -2.114849e+11 -7.000210e+14 -1.949198e+09
## [2805,] -4.611448e+09 -3.733758e+09 -1.167338e+13 -8.256365e+07
## [2806,] -4.667345e+06 -3.089413e+06 -5.801395e+10 -4.259289e+06
## [2807,] -2.491410e+05 -1.608220e+05 -2.483204e+10 -4.692293e+06
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## [2811,] -4.414890e+09 -3.734038e+09 -1.169487e+13 -7.265109e+07
## [2812,] -4.438057e+06 -3.630183e+06 -5.808509e+10 -4.293371e+06
## [2813,] -3.432965e+05 -6.366968e+04 -2.486249e+10 -4.920534e+06
## [2814,] -1.021221e+08 -9.828908e+07 -1.546048e+11 -1.051584e+07
## [2815,] -3.172247e+11 -2.895120e+11 -9.258143e+14 -2.582195e+09
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## [2821,] -3.650999e+11 -2.602053e+11 -9.258143e+14 -3.119008e+09
## [2822,] -2.504306e+11 -2.114821e+11 -7.017388e+14 -2.370640e+09
## [2823,] -4.654609e+09 -3.994343e+09 -1.170203e+13 -7.554717e+07
## [2824,] -4.657445e+06 -3.627272e+06 -5.812068e+10 -4.207344e+06
## [2825,] -2.324500e+05 -2.468578e+05 -2.487772e+10 -4.693723e+06
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## [2830,] -4.494643e+06 -4.526322e+06 -5.815628e+10 -4.176879e+06
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## [2833,] -3.353215e+11 -2.602038e+11 -9.269489e+14 -2.706639e+09
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## [2835,] -4.597762e+09 -3.734225e+09 -1.170920e+13 -7.465339e+07
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```

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## [2841,] -4.168576e+09 -4.541471e+09 -1.173071e+13 -7.235967e+07
## [2842,] -3.846098e+06 -3.070638e+06 -5.826313e+10 -4.256741e+06
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## [2844,] -9.553711e+07 -9.137282e+07 -1.550786e+11 -1.030882e+07
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## [2850,] -9.207509e+07 -9.838001e+07 -1.551735e+11 -1.093777e+07
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## [2857,] -3.278022e+11 -2.895046e+11 -9.309254e+14 -3.025265e+09
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## [2869,] -3.396449e+11 -2.697918e+11 -9.320631e+14 -2.496811e+09
## [2870,] -2.297595e+11 -2.266594e+11 -7.060426e+14 -2.191727e+09
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## [2877,] -4.612901e+09 -3.735065e+09 -1.177380e+13 -8.428862e+07
## [2878,] -4.155891e+06 -2.799461e+06 -5.847714e+10 -3.940179e+06
## [2879,] -2.531696e+05 -2.889059e+05 -2.504558e+10 -4.961299e+06
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## [2881,] -3.214268e+11 -2.795589e+11 -9.332015e+14 -2.590664e+09
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## [2884,] -4.614667e+06 -3.046583e+06 -5.858429e+10 -4.217506e+06
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## [2889,] -4.699227e+09 -3.995889e+09 -1.181697e+13 -7.630744e+07
## [2890,] -5.865264e+06 -3.038586e+06 -5.869153e+10 -4.263807e+06
## [2891,] -2.542627e+05 -2.348583e+05 -2.512207e+10 -4.882477e+06
## [2892,] -1.009370e+08 -8.927262e+07 -1.562189e+11 -1.052248e+07
## [2893,] -3.439987e+11 -3.203674e+11 -9.354804e+14 -3.127974e+09
## [2894,] -2.779260e+11 -2.189972e+11 -7.086312e+14 -2.191298e+09
## [2895,] -4.858399e+09 -3.995889e+09 -1.181697e+13 -7.982126e+07
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```

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## [2902,] -4.569604e+06 -3.577960e+06 -5.872731e+10 -4.251572e+06
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## [2909,] -2.058067e+05 -8.229231e+04 -2.515269e+10 -4.954534e+06
## [2910,] -9.434641e+07 -8.483550e+07 -1.564094e+11 -1.054016e+07
## [2911,] -3.267272e+11 -3.193115e+11 -9.366209e+14 -2.983559e+09
## [2912,] -2.561312e+11 -2.189950e+11 -7.099273e+14 -1.926226e+09
## [2913,] -4.599628e+09 -4.129602e+09 -1.183858e+13 -7.579976e+07
## [2914,] -6.713654e+06 -2.080928e+06 -5.879888e+10 -4.239429e+06
## [2915,] -1.751885e+05 -1.123313e+05 -2.516802e+10 -4.905643e+06
## [2916,] -8.976888e+07 -1.034024e+08 -1.565046e+11 -1.092147e+07
## [2917,] -3.385505e+11 -2.894947e+11 -9.377620e+14 -3.055086e+09
## [2918,] -2.694358e+11 -2.344416e+11 -7.103596e+14 -2.221493e+09
## [2919,] -4.557342e+09 -3.609239e+09 -1.185300e+13 -8.026418e+07
## [2920,] -4.620447e+06 -2.528652e+06 -5.887050e+10 -4.335323e+06
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## [2922,] -1.000539e+08 -8.934483e+07 -1.566953e+11 -1.015461e+07
## [2923,] -3.550136e+11 -2.601882e+11 -9.383329e+14 -2.983309e+09
## [2924,] -2.220402e+11 -2.344401e+11 -7.112246e+14 -2.603531e+09
## [2925,] -4.459062e+09 -3.996469e+09 -1.186021e+13 -7.420790e+07
## [2926,] -4.585167e+06 -3.563520e+06 -5.890633e+10 -4.157137e+06
## [2927,] -2.257497e+05 -5.260944e+05 -2.521401e+10 -4.898415e+06
## [2928,] -1.012698e+08 -8.489182e+07 -1.567906e+11 -1.077105e+07
## [2929,] -3.267219e+11 -2.996074e+11 -9.400465e+14 -2.983058e+09
## [2930,] -2.685912e+11 -2.266493e+11 -7.120901e+14 -2.168005e+09
## [2931,] -4.361953e+09 -3.865422e+09 -1.187465e+13 -7.770054e+07
## [2932,] -4.173107e+06 -2.763777e+06 -5.897801e+10 -4.351095e+06
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## [2934,] -9.701114e+07 -9.630526e+07 -1.569814e+11 -1.058552e+07
## [2935,] -3.775707e+11 -2.795492e+11 -9.400465e+14 -3.200683e+09
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## [2947,] -3.385443e+11 -2.894890e+11 -9.417616e+14 -3.179368e+09
## [2948,] -2.360101e+11 -2.040686e+11 -7.133893e+14 -2.092914e+09
## [2949,] -4.918223e+09 -4.130486e+09 -1.190354e+13 -8.148990e+07
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## [2963,] -2.997670e+05 -1.412331e+05 -2.533685e+10 -4.838796e+06
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## [2972,] -2.553000e+11 -1.968016e+11 -7.159913e+14 -2.258946e+09
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## [3069,] -4.391774e+09 -4.405657e+09 -1.202672e+13 -7.415006e+07
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```



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## [3099,] -4.476424e+09 -3.739269e+09 -1.209948e+13 -8.647142e+07
## [3100,] -4.016874e+06 -2.685576e+06 -6.009469e+10 -4.622024e+06
## [3101,] -2.588607e+05 -4.390651e+04 -2.572267e+10 -5.096692e+06
## [3102,] -9.724219e+07 -8.758257e+07 -1.599537e+11 -1.039018e+07
## [3103,] -3.256303e+11 -2.601617e+11 -9.578451e+14 -2.731495e+09
## [3104,] -2.423363e+11 -2.040493e+11 -7.255726e+14 -2.617532e+09
## [3105,] -4.532724e+09 -3.999754e+09 -1.210677e+13 -7.720981e+07
## [3106,] -4.411696e+06 -2.683072e+06 -6.013088e+10 -4.444267e+06
## [3107,] -2.474504e+05 -2.054741e+05 -2.575366e+10 -5.024111e+06
## [3108,] -9.633046e+07 -8.318820e+07 -1.601464e+11 -1.040775e+07
## [3109,] -3.417790e+11 -2.507395e+11 -9.589991e+14 -2.558800e+09
## [3110,] -2.569235e+11 -2.189679e+11 -7.264468e+14 -1.930800e+09
## [3111,] -4.476629e+09 -3.487825e+09 -1.211406e+13 -6.421076e+07
## [3112,] -5.260359e+06 -2.729634e+06 -6.016709e+10 -4.431775e+06
## [3113,] -3.204964e+05 -9.371074e+04 -2.575366e+10 -4.999949e+06
## [3114,] -9.869373e+07 -8.761118e+07 -1.601464e+11 -1.082098e+07
## [3115,] -3.505524e+11 -2.697545e+11 -9.589991e+14 -2.939740e+09
## [3116,] -2.839118e+11 -2.114421e+11 -7.264468e+14 -2.158114e+09
## [3117,] -4.848287e+09 -3.487915e+09 -1.212135e+13 -7.631957e+07
## [3118,] -4.342887e+06 -3.188510e+06 -6.020331e+10 -4.344365e+06
## [3119,] -2.515880e+05 -4.094190e+04 -2.576916e+10 -5.069423e+06
## [3120,] -9.872410e+07 -8.321608e+07 -1.603392e+11 -1.037903e+07
## [3121,] -3.203302e+11 -2.697529e+11 -9.601538e+14 -2.606005e+09
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## [3124,] -4.182603e+06 -2.922499e+06 -6.027577e+10 -4.285647e+06
## [3125,] -2.549876e+05 -1.245287e+05 -2.580018e+10 -5.021193e+06
## [3126,] -9.731755e+07 -8.990910e+07 -1.604357e+11 -1.056209e+07
## [3127,] -3.672994e+11 -3.203294e+11 -9.607315e+14 -2.849240e+09
## [3128,] -2.281703e+11 -2.344120e+11 -7.277591e+14 -2.358293e+09
## [3129,] -4.504992e+09 -3.612821e+09 -1.213594e+13 -7.416721e+07
## [3130,] -3.766431e+06 -3.454735e+06 -6.027577e+10 -4.307290e+06
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## [3132,] -1.011471e+08 -8.766841e+07 -1.605322e+11 -1.043521e+07
## [3133,] -3.235004e+11 -2.507357e+11 -9.618872e+14 -2.809419e+09
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## [3137,] -2.340739e+05 -4.169362e+04 -2.583122e+10 -5.025845e+06
## [3138,] -9.996250e+07 -8.545599e+07 -1.606287e+11 -1.135644e+07
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## [3140,] -2.544571e+11 -1.896496e+11 -7.295106e+14 -1.930330e+09
## [3141,] -4.533547e+09 -3.740110e+09 -1.216515e+13 -7.242744e+07
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## [3143,] -2.278896e+05 -4.107187e+04 -2.586227e+10 -5.130013e+06
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## [3145,] -3.538629e+11 -2.795152e+11 -9.642009e+14 -2.501851e+09
## [3146,] -2.455331e+11 -2.266187e+11 -7.303872e+14 -1.908872e+09
## [3147,] -4.393901e+09 -3.740297e+09 -1.217976e+13 -7.587841e+07
## [3148,] -4.255682e+06 -2.420475e+06 -6.049344e+10 -4.492337e+06
## [3149,] -4.129917e+05 -1.992866e+05 -2.589335e+10 -5.059401e+06
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## [3151,] -3.352640e+11 -2.697473e+11 -9.642009e+14 -3.082169e+09
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## [3153,] -4.435728e+09 -4.000817e+09 -1.218708e+13 -6.756288e+07
## [3154,] -4.470570e+06 -3.163997e+06 -6.052976e+10 -4.508236e+06
## [3155,] -1.572870e+05 -1.572870e+05 -2.590889e+10 -4.994633e+06
## [3156,] -9.093567e+07 -9.933731e+07 -1.612084e+11 -1.089215e+07
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## [3186,] -9.922067e+07 -8.565390e+07 -1.619830e+11 -1.057156e+07
## [3187,] -3.213713e+11 -2.697394e+11 -9.699971e+14 -2.623740e+09
## [3188,] -2.503725e+11 -1.967724e+11 -7.347778e+14 -1.936658e+09
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## [3201,] -4.591653e+09 -3.489811e+09 -1.227499e+13 -7.208849e+07
## [3202,] -4.153773e+06 -2.625805e+06 -6.096640e+10 -4.464936e+06
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## [3204,] -9.202670e+07 -9.019916e+07 -1.623710e+11 -1.107189e+07
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## [3210,] -9.044113e+07 -9.021367e+07 -1.624680e+11 -1.066665e+07
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## [3214,] -4.053837e+06 -3.964242e+06 -6.107581e+10 -4.421151e+06
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## [3216,] -9.343894e+07 -9.717709e+07 -1.625651e+11 -1.113790e+07
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## [3232,] -4.162374e+06 -3.381274e+06 -6.122183e+10 -4.284534e+06
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## [3245,] -2.784871e+05 -5.446561e+04 -2.623641e+10 -5.217906e+06
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```

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## [3263,] -2.796335e+05 -7.762572e+04 -2.631469e+10 -5.079407e+06
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## [3274,] -3.581082e+06 -3.927811e+06 -6.151441e+10 -4.418941e+06
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## [3289,] -3.406545e+11 -2.995463e+11 -9.822256e+14 -2.997343e+09
## [3290,] -2.463134e+11 -2.040196e+11 -7.444836e+14 -2.125183e+09
## [3291,] -4.622144e+09 -4.137462e+09 -1.242221e+13 -7.270478e+07
## [3292,] -4.305641e+06 -2.576509e+06 -6.169763e+10 -4.577500e+06
## [3293,] -2.399814e+05 -5.061311e+04 -2.640878e+10 -5.128940e+06
## [3294,] -1.034288e+08 -9.047515e+07 -1.642202e+11 -1.076453e+07
## [3295,] -3.450183e+11 -2.995446e+11 -9.833942e+14 -2.669880e+09
## [3296,] -2.560694e+11 -2.040189e+11 -7.449263e+14 -1.978168e+09
## [3297,] -4.537252e+09 -4.137561e+09 -1.242960e+13 -7.253942e+07
## [3298,] -3.968868e+06 -2.574056e+06 -6.173430e+10 -4.276338e+06
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## [3300,] -1.008148e+08 -8.825608e+07 -1.645132e+11 -1.092148e+07
## [3301,] -3.417388e+11 -2.697187e+11 -9.851485e+14 -2.936012e+09
## [3302,] -2.552468e+11 -2.040168e+11 -7.462551e+14 -2.223233e+09
## [3303,] -4.551673e+09 -4.411543e+09 -1.245176e+13 -7.821206e+07
## [3304,] -4.049284e+06 -3.900599e+06 -6.184439e+10 -4.648294e+06
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## [3306,] -1.015524e+08 -8.165368e+07 -1.646109e+11 -1.080032e+07
## [3307,] -3.224046e+11 -2.894256e+11 -9.863188e+14 -2.621549e+09
## [3308,] -2.527922e+11 -2.040154e+11 -7.471416e+14 -1.941918e+09
## [3309,] -4.397752e+09 -4.411644e+09 -1.245916e+13 -7.456658e+07
## [3310,] -4.700818e+06 -3.330879e+06 -6.188111e+10 -4.561949e+06
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## [3312,] -9.079028e+07 -9.517476e+07 -1.648064e+11 -1.103977e+07
## [3313,] -3.202904e+11 -3.202904e+11 -9.869043e+14 -2.996674e+09
## [3314,] -2.479210e+11 -2.114083e+11 -7.475851e+14 -1.892129e+09
## [3315,] -4.537767e+09 -3.743943e+09 -1.246655e+13 -7.331973e+07
## [3316,] -3.140337e+06 -3.605765e+06 -6.191784e+10 -4.422925e+06
## [3317,] -2.443735e+05 -7.218919e+04 -2.651877e+10 -5.206790e+06
## [3318,] -1.006359e+08 -8.831352e+07 -1.649042e+11 -1.091796e+07
## [3319,] -3.266503e+11 -2.697156e+11 -9.874899e+14 -2.669327e+09
## [3320,] -2.536070e+11 -2.040141e+11 -7.480287e+14 -1.934640e+09
## [3321,] -4.552085e+09 -4.274003e+09 -1.248135e+13 -7.771156e+07
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## [3324,] -9.359175e+07 -9.521950e+07 -1.650998e+11 -1.076255e+07
## [3325,] -3.277148e+11 -2.697140e+11 -9.886616e+14 -2.659548e+09
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## [3328,] -5.352171e+06 -2.319314e+06 -6.206487e+10 -4.540066e+06
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## [3330,] -9.926147e+07 -9.524932e+07 -1.652956e+11 -1.063945e+07
## [3331,] -3.234586e+11 -3.309220e+11 -9.898341e+14 -3.016697e+09
## [3332,] -2.536039e+11 -2.422950e+11 -7.498045e+14 -2.261064e+09
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## [3343,] -3.439126e+11 -2.995338e+11 -9.910072e+14 -1.929439e+09
## [3344,] -2.577038e+11 -2.265852e+11 -7.506931e+14 -1.436120e+09
## [3345,] -4.552601e+09 -4.005169e+09 -1.251838e+13 -8.747904e+07
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## [3383,] -7.292022e+06 -7.186428e+06 -3.882385e+08 -9.777975e+03
## [3384,] -6.163201e+07 -5.087428e+07 -2.414220e+09 -6.867774e+05
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## [3409,] -3.153496e+11 -2.817530e+11 -2.801910e+13 -1.601170e+09
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## [3411,] -4.172267e+09 -3.363913e+09 -3.539367e+11 -2.832200e+07
## [3412,] -1.755547e+07 -1.345323e+07 -1.757903e+09 -7.356815e+03
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## [3414,] -5.980763e+07 -5.091135e+07 -4.679001e+09 -9.953074e+05
## [3415,] -3.248407e+11 -2.623121e+11 -2.801910e+13 -1.623625e+09
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## [3418,] -1.863399e+07 -1.345323e+07 -1.757903e+09 -9.839108e+03
## [3419,] -6.545867e+06 -6.297247e+06 -7.524452e+08 -4.444934e+04
## [3420,] -5.962269e+07 -5.616320e+07 -4.679001e+09 -9.645099e+05
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## [3437,] -2.331727e+05 -6.616151e+04 -2.675523e+10 -5.234509e+06
## [3438,] -9.776554e+07 -9.309003e+07 -1.663745e+11 -1.105741e+07
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## [3441,] -4.667233e+09 -4.553529e+09 -1.258518e+13 -8.032062e+07
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## [3464,] -2.576937e+11 -2.265758e+11 -7.564822e+14 -2.456898e+09
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```

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## [3481,] -3.330515e+11 -2.506829e+11 -1.002187e+15 -2.287254e+09
## [3482,] -2.462883e+11 -1.967351e+11 -7.591616e+14 -2.122859e+09
## [3483,] -4.087003e+09 -3.875691e+09 -1.266705e+13 -8.028368e+07
## [3484,] -4.481304e+06 -3.813558e+06 -6.291368e+10 -4.580090e+06
## [3485,] -1.937181e+05 -6.190821e+04 -2.692929e+10 -5.259532e+06
## [3486,] -1.010350e+08 -9.095549e+07 -1.674570e+11 -1.110540e+07
## [3487,] -3.287617e+11 -2.995170e+11 -1.002777e+15 -2.994416e+09
## [3488,] -2.535870e+11 -2.189142e+11 -7.596086e+14 -2.213433e+09
## [3489,] -4.625573e+09 -4.140707e+09 -1.266705e+13 -7.990900e+07
## [3490,] -4.355891e+06 -2.737417e+06 -6.291368e+10 -4.596065e+06
## [3491,] -7.471560e+04 -1.203577e+05 -2.692929e+10 -5.248287e+06
## [3492,] -9.745872e+07 -9.557774e+07 -1.674570e+11 -1.097023e+07
## [3493,] -3.395353e+11 -2.894018e+11 -1.003367e+15 -3.128398e+09
## [3494,] -2.552228e+11 -2.265700e+11 -7.600558e+14 -2.305899e+09
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## [3496,] -3.987279e+06 -2.263792e+06 -6.295071e+10 -4.724944e+06
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## [3504,] -1.037452e+08 -9.562257e+07 -1.677528e+11 -1.101718e+07
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## [3511,] -3.571323e+11 -2.600978e+11 -1.005730e+15 -3.426770e+09
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## [3513,] -4.583479e+09 -3.746936e+09 -1.270436e+13 -7.997732e+07
## [3514,] -4.094927e+06 -4.094927e+06 -6.309896e+10 -4.554979e+06
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## [3519,] -4.597765e+09 -3.876261e+09 -1.271183e+13 -7.794484e+07
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## [3521,] -2.534773e+05 -2.235131e+03 -2.704036e+10 -5.406588e+06
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## [3526,] -3.786745e+06 -2.966030e+06 -6.324739e+10 -4.587183e+06
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## [3536,] -2.382939e+11 -1.967270e+11 -7.645346e+14 -1.975178e+09
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## [3539,] -1.306973e+05 -8.290721e+04 -2.713574e+10 -5.400534e+06
## [3540,] -9.741859e+07 -8.887453e+07 -1.687407e+11 -1.093302e+07
## [3541,] -3.537911e+11 -2.893919e+11 -1.010464e+15 -3.158723e+09
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## [3562,] -4.169611e+06 -2.937148e+06 -6.365645e+10 -4.636097e+06
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## [3564,] -9.447590e+07 -9.823454e+07 -1.694340e+11 -1.127972e+07
## [3565,] -3.808938e+11 -2.516009e+11 -1.014616e+15 -2.733489e+09
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## [3568,] -3.608087e+06 -2.445743e+06 -6.369371e+10 -4.759023e+06
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## [3615,] -4.586066e+09 -3.749276e+09 -1.289171e+13 -8.918086e+07
## [3616,] -4.353595e+06 -2.662086e+06 -6.402947e+10 -4.762998e+06
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## [3618,] -9.909953e+07 -9.602650e+07 -1.704269e+11 -1.107478e+07
## [3619,] -3.255361e+11 -2.893771e+11 -1.021157e+15 -2.522448e+09
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## [3640,] -3.966798e+06 -2.644660e+06 -6.429124e+10 -4.802704e+06
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## [3642,] -9.082465e+07 -9.151020e+07 -1.712233e+11 -1.122749e+07
## [3643,] -3.548770e+11 -3.097720e+11 -1.025927e+15 -2.860095e+09
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## [3645,] -4.672455e+09 -3.879402e+09 -1.295949e+13 -8.195167e+07
## [3646,] -4.171234e+06 -3.990453e+06 -6.436613e+10 -4.705299e+06
## [3647,] -3.218475e+05 -1.461864e+04 -2.755099e+10 -5.419929e+06
## [3648,] -1.033309e+08 -9.382875e+07 -1.713230e+11 -1.131297e+07
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## [3652,] -3.637991e+06 -2.400543e+06 -6.440359e+10 -4.809486e+06
```

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## [3657,] -4.687193e+09 -4.280800e+09 -1.298967e+13 -7.825958e+07
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## [3671,] -6.646847e+04 -1.680098e+05 -2.766333e+10 -5.346862e+06
## [3672,] -1.022262e+08 -8.935061e+07 -1.720215e+11 -1.117229e+07
## [3673,] -3.244596e+11 -2.893640e+11 -1.030709e+15 -3.000688e+09
## [3674,] -2.502937e+11 -2.265365e+11 -7.807673e+14 -2.225334e+09
## [3675,] -4.336161e+09 -4.011651e+09 -1.301989e+13 -8.416153e+07
## [3676,] -3.703227e+06 -2.159254e+06 -6.466611e+10 -4.705935e+06
## [3677,] -1.966619e+05 -1.317802e+04 -2.767940e+10 -5.418698e+06
## [3678,] -1.022417e+08 -9.164182e+07 -1.721214e+11 -1.097033e+07
## [3679,] -3.427604e+11 -3.416700e+11 -1.030709e+15 -3.000688e+09
## [3680,] -2.462512e+11 -2.188799e+11 -7.812206e+14 -2.067451e+09
## [3681,] -4.559615e+09 -3.750960e+09 -1.302745e+13 -6.420741e+07
## [3682,] -3.845139e+06 -2.381638e+06 -6.470366e+10 -4.819948e+06
## [3683,] -1.707900e+05 -4.223780e+03 -2.769547e+10 -5.674146e+06
## [3684,] -9.865912e+07 -8.713120e+07 -1.722214e+11 -1.099126e+07
## [3685,] -3.244587e+11 -2.696568e+11 -1.031307e+15 -2.839460e+09
## [3686,] -2.551858e+11 -2.188792e+11 -7.816741e+14 -2.179510e+09
## [3687,] -4.644923e+09 -4.011845e+09 -1.303501e+13 -8.209007e+07
## [3688,] -4.201001e+06 -3.119572e+06 -6.474122e+10 -4.745004e+06
## [3689,] -1.996689e+05 -1.661358e+05 -2.771155e+10 -5.462444e+06
## [3690,] -9.867430e+07 -9.397685e+07 -1.723213e+11 -1.132412e+07
## [3691,] -3.340839e+11 -3.416682e+11 -1.031906e+15 -2.899286e+09
## [3692,] -2.242245e+11 -2.265350e+11 -7.816741e+14 -2.349321e+09
## [3693,] -4.281400e+09 -4.145527e+09 -1.303501e+13 -7.486000e+07
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## [3696,] -1.027727e+08 -8.940840e+07 -1.724213e+11 -1.096174e+07
## [3697,] -3.108001e+11 -3.097618e+11 -1.033104e+15 -2.634471e+09
## [3698,] -2.470546e+11 -2.188778e+11 -7.825814e+14 -2.484749e+09
## [3699,] -4.876205e+09 -3.499207e+09 -1.305014e+13 -8.098357e+07
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## [3701,] -2.020112e+05 -1.269129e+05 -2.775980e+10 -5.415930e+06
## [3702,] -1.067229e+08 -9.171499e+07 -1.726214e+11 -1.139604e+07
## [3703,] -3.319300e+11 -2.506423e+11 -1.033703e+15 -2.605769e+09
## [3704,] -2.576480e+11 -2.039602e+11 -7.830353e+14 -2.364851e+09
## [3705,] -4.688135e+09 -3.751335e+09 -1.305771e+13 -8.558183e+07
## [3706,] -3.659945e+06 -3.111479e+06 -6.485396e+10 -4.661140e+06
## [3707,] -1.642723e+05 -2.560843e+04 -2.775980e+10 -5.390843e+06
## [3708,] -9.471878e+07 -8.277611e+07 -1.726214e+11 -1.116295e+07
## [3709,] -3.149698e+11 -2.696537e+11 -1.033703e+15 -2.779855e+09
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## [3712,] -4.158010e+06 -2.605043e+06 -6.489156e+10 -4.648346e+06
## [3713,] -1.590983e+05 -2.512169e+04 -2.779200e+10 -5.434476e+06
## [3714,] -1.038078e+08 -8.499605e+07 -1.728216e+11 -1.139020e+07
## [3715,] -2.974344e+11 -2.893574e+11 -1.035501e+15 -3.000019e+09
## [3716,] -2.462459e+11 -2.039582e+11 -7.843977e+14 -1.964993e+09
## [3717,] -4.546213e+09 -3.880925e+09 -1.308043e+13 -7.935150e+07
## [3718,] -3.622733e+06 -3.651179e+06 -6.496680e+10 -4.722765e+06
## [3719,] -2.462356e+05 -3.557542e+03 -2.780810e+10 -5.460944e+06
## [3720,] -1.009330e+08 -8.949513e+07 -1.730219e+11 -1.110349e+07
## [3721,] -3.442449e+11 -2.817530e+11 -2.801910e+13 -1.534746e+09
## [3722,] -2.648745e+11 -1.914923e+11 -2.122461e+13 -1.330371e+09
## [3723,] -4.064799e+09 -3.611112e+09 -3.539367e+11 -2.710984e+07
## [3724,] -1.837732e+07 -1.400589e+07 -1.757903e+09 -9.545498e+03
## [3725,] -6.824909e+06 -5.126345e+06 -7.524452e+08 -4.403661e+04
## [3726,] -6.186090e+07 -5.091135e+07 -4.679001e+09 -9.574715e+05
## [3727,] -3.453394e+11 -2.917340e+11 -2.801910e+13 -1.542057e+09
## [3728,] -2.533142e+11 -1.986575e+11 -2.122461e+13 -1.342232e+09
## [3729,] -4.433123e+09 -3.611112e+09 -3.539367e+11 -2.393870e+07
## [3730,] -1.632778e+07 -1.755547e+07 -1.757903e+09 -8.552908e+03
## [3731,] -6.520788e+06 -6.545867e+06 -7.524452e+08 -4.383097e+04
## [3732,] -5.851905e+07 -5.797110e+07 -4.679001e+09 -9.645099e+05
## [3733,] -3.344724e+11 -2.817530e+11 -2.801910e+13 -1.753819e+09
## [3734,] -2.404174e+11 -1.986568e+11 -2.129942e+13 -1.077364e+09
## [3735,] -4.240246e+09 -3.364002e+09 -3.551840e+11 -2.690022e+07
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## [3738,] -6.225000e+07 -5.439522e+07 -4.695491e+09 -8.922057e+05
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## [3740,] -2.665455e+11 -1.986561e+11 -2.137435e+13 -1.420497e+09
## [3741,] -4.503289e+09 -3.486598e+09 -3.564336e+11 -2.395366e+07
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## [3760,] -4.021899e+06 -1.922256e+06 -6.507974e+10 -4.768496e+06
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## [3766,] -4.261611e+06 -2.355765e+06 -6.511740e+10 -4.755556e+06
## [3767,] -1.446537e+05 -4.150660e+04 -2.787257e+10 -5.456887e+06
## [3768,] -9.669650e+07 -8.953851e+07 -1.733226e+11 -1.244073e+07
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## [3772,] -3.605301e+06 -3.087264e+06 -6.519277e+10 -4.890017e+06
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## [3780,] -1.029742e+08 -8.734531e+07 -1.737239e+11 -1.172990e+07
## [3781,] -3.405671e+11 -2.893508e+11 -1.040305e+15 -3.185915e+09
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## [3783,] -4.848291e+09 -4.146905e+09 -1.314111e+13 -8.612551e+07
## [3784,] -3.292166e+06 -2.577981e+06 -6.530590e+10 -4.694352e+06
## [3785,] -1.238932e+05 -3.996450e+04 -2.795325e+10 -5.571597e+06
## [3786,] -1.012966e+08 -8.513700e+07 -1.738243e+11 -1.117625e+07
## [3787,] -3.471242e+11 -2.994635e+11 -1.040906e+15 -3.143884e+09
## [3788,] -2.592882e+11 -2.113444e+11 -7.884920e+14 -2.051616e+09
## [3789,] -4.589585e+09 -3.881782e+09 -1.314871e+13 -7.505848e+07
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## [3792,] -1.003507e+08 -8.737388e+07 -1.739248e+11 -1.115736e+07
## [3793,] -3.139134e+11 -3.308455e+11 -1.041508e+15 -2.576293e+09
## [3794,] -2.551726e+11 -2.265227e+11 -7.894032e+14 -1.885952e+09
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## [3798,] -9.750942e+07 -8.963977e+07 -1.740252e+11 -1.112252e+07
## [3799,] -3.035559e+11 -3.202100e+11 -1.042109e+15 -2.642868e+09
## [3800,] -2.659368e+11 -2.343092e+11 -7.898591e+14 -2.316648e+09
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## [3803,] -1.512725e+05 -9.903472e+03 -2.800172e+10 -5.705964e+06
## [3804,] -1.035227e+08 -8.740246e+07 -1.741257e+11 -1.104793e+07
## [3805,] -3.460241e+11 -3.097482e+11 -1.042711e+15 -2.897805e+09
## [3806,] -2.543530e+11 -2.113423e+11 -7.898591e+14 -1.921276e+09
## [3807,] -5.129616e+09 -4.283200e+09 -1.317150e+13 -7.932840e+07
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## [3809,] -1.025654e+05 -2.420221e+05 -2.800172e+10 -5.330336e+06
## [3810,] -1.059878e+08 -9.659643e+07 -1.742263e+11 -1.160069e+07
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## [3812,] -2.454309e+11 -2.039485e+11 -7.907712e+14 -1.978450e+09
## [3813,] -4.463454e+09 -4.283500e+09 -1.319432e+13 -8.314284e+07
## [3814,] -3.551068e+06 -2.330033e+06 -6.553246e+10 -5.087305e+06
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## [3816,] -9.851769e+07 -8.744532e+07 -1.744274e+11 -1.079418e+07
## [3817,] -3.202065e+11 -2.600471e+11 -1.044517e+15 -2.585375e+09
## [3818,] -2.446271e+11 -2.039478e+11 -7.912274e+14 -2.051201e+09
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## [3820,] -4.041907e+06 -2.327701e+06 -6.557026e+10 -4.649770e+06
## [3821,] -1.408543e+05 -2.095119e+04 -2.808259e+10 -5.614434e+06
## [3822,] -9.177852e+07 -1.014197e+08 -1.746286e+11 -1.154007e+07
## [3823,] -3.362209e+11 -3.097431e+11 -1.046325e+15 -2.472664e+09
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## [3844,] -4.180728e+06 -2.794860e+06 -6.572156e+10 -4.914271e+06
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## [3847,] -3.276264e+11 -2.600417e+11 -1.048738e+15 -2.907023e+09
## [3848,] -2.327331e+11 -2.188585e+11 -7.948820e+14 -2.043307e+09
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## [3860,] -2.366613e+11 -2.113332e+11 -7.957970e+14 -1.984924e+09
## [3861,] -4.492492e+09 -3.883306e+09 -1.327052e+13 -7.508897e+07
## [3862,] -3.578538e+06 -2.085781e+06 -6.591093e+10 -4.947801e+06
## [3863,] -9.328083e+04 -1.921909e+04 -2.821223e+10 -5.629465e+06
## [3864,] -9.677676e+07 -8.758830e+07 -1.754348e+11 -1.157350e+07
## [3865,] -3.351348e+11 -2.600393e+11 -1.050550e+15 -3.008141e+09
## [3866,] -2.366613e+11 -2.584504e+11 -7.957970e+14 -2.370663e+09
## [3867,] -4.506534e+09 -4.014846e+09 -1.327052e+13 -8.271015e+07
## [3868,] -3.746881e+06 -2.779551e+06 -6.594884e+10 -4.961163e+06
## [3869,] -8.648282e+04 -1.861391e+05 -2.824468e+10 -5.523155e+06
## [3870,] -1.032691e+08 -9.446639e+07 -1.756366e+11 -1.187900e+07
## [3871,] -3.233682e+11 -2.696299e+11 -1.051758e+15 -2.603429e+09
## [3872,] -2.438155e+11 -2.113311e+11 -7.971704e+14 -2.276603e+09
## [3873,] -4.605748e+09 -4.422919e+09 -1.329343e+13 -8.275185e+07
## [3874,] -3.945641e+06 -2.079165e+06 -6.602469e+10 -4.908310e+06
## [3875,] -1.005394e+05 -3.408806e+04 -2.827716e+10 -5.585855e+06
## [3876,] -1.057469e+08 -8.764552e+07 -1.758385e+11 -1.148050e+07
## [3877,] -3.394614e+11 -2.696283e+11 -1.052968e+15 -2.806825e+09
## [3878,] -2.701229e+11 -2.265096e+11 -7.976285e+14 -2.284277e+09
## [3879,] -4.549305e+09 -4.285001e+09 -1.330871e+13 -8.702266e+07
## [3880,] -4.207394e+06 -2.524280e+06 -6.613854e+10 -4.872270e+06
## [3881,] -1.793321e+05 -7.908014e+04 -2.830965e+10 -5.586123e+06
## [3882,] -1.052866e+08 -8.992939e+07 -1.760406e+11 -1.147464e+07
## [3883,] -3.427255e+11 -3.416352e+11 -1.054178e+15 -2.876214e+09
## [3884,] -2.684376e+11 -2.342951e+11 -7.985451e+14 -2.386040e+09
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## [3886,] -3.703344e+06 -4.776135e+06 -6.613854e+10 -4.813186e+06
## [3887,] -2.225661e+05 -7.865097e+04 -2.832590e+10 -5.592055e+06
## [3888,] -1.023758e+08 -8.768844e+07 -1.761416e+11 -1.179002e+07
## [3889,] -3.362076e+11 -2.696251e+11 -1.055388e+15 -2.679597e+09
## [3890,] -2.502616e+11 -2.113268e+11 -7.999209e+14 -1.962690e+09
## [3891,] -4.507457e+09 -3.754799e+09 -1.333929e+13 -7.575380e+07
## [3892,] -3.114283e+06 -3.549686e+06 -6.629050e+10 -4.925417e+06
## [3893,] -1.972995e+05 -1.695948e+04 -2.839097e+10 -5.608844e+06
## [3894,] -1.051195e+08 -8.774570e+07 -1.765462e+11 -1.152490e+07
## [3895,] -3.223013e+11 -2.994409e+11 -1.057206e+15 -2.698691e+09
## [3896,] -2.592672e+11 -2.113254e+11 -8.008388e+14 -1.991408e+09
## [3897,] -4.479598e+09 -4.015912e+09 -1.335460e+13 -8.305377e+07
## [3898,] -4.161251e+06 -2.281301e+06 -6.632851e+10 -4.879262e+06
## [3899,] -9.115535e+04 -5.213715e+04 -2.839097e+10 -5.574043e+06
## [3900,] -1.017123e+08 -8.551817e+07 -1.765462e+11 -1.164709e+07
## [3901,] -3.286819e+11 -2.696227e+11 -1.057206e+15 -2.564828e+09
## [3902,] -2.559735e+11 -2.265045e+11 -8.008388e+14 -2.146344e+09
## [3903,] -4.272208e+09 -4.016202e+09 -1.337757e+13 -8.424440e+07
## [3904,] -3.679853e+06 -2.504892e+06 -6.644263e+10 -5.005514e+06
## [3905,] -1.429730e+05 -3.132501e+04 -2.843981e+10 -5.612732e+06
## [3906,] -1.022420e+08 -8.423747e+07 -1.768500e+11 -1.124963e+07
## [3907,] -3.405385e+11 -2.893245e+11 -1.059631e+15 -2.517538e+09
## [3908,] -2.454112e+11 -1.966701e+11 -8.026761e+14 -1.976683e+09
## [3909,] -4.368722e+09 -4.016396e+09 -1.339290e+13 -7.566475e+07
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## [3911,] -1.105153e+05 -1.597910e+04 -2.847240e+10 -5.819422e+06
## [3912,] -1.020310e+08 -9.007438e+07 -1.770526e+11 -1.143726e+07
## [3913,] -3.394508e+11 -3.097235e+11 -1.060238e+15 -2.698294e+09
## [3914,] -2.446066e+11 -2.342870e+11 -8.035955e+14 -1.919267e+09
## [3915,] -4.410429e+09 -4.016493e+09 -1.340057e+13 -7.732582e+07
## [3916,] -3.614128e+06 -2.048428e+06 -6.655684e+10 -5.015777e+06
## [3917,] -1.602831e+05 -3.051886e+04 -2.848870e+10 -5.717053e+06
## [3918,] -9.750459e+07 -9.703252e+07 -1.771540e+11 -1.155605e+07
## [3919,] -3.222953e+11 -2.793827e+11 -1.061452e+15 -3.440286e+09
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## [3937,] -3.004526e+11 -3.526025e+11 -1.063882e+15 -3.203617e+09
## [3938,] -2.535085e+11 -2.039257e+11 -8.058964e+14 -2.221371e+09
## [3939,] -4.522858e+09 -3.885401e+09 -1.343894e+13 -8.093148e+07
## [3940,] -5.019091e+06 -3.241121e+06 -6.674741e+10 -4.962879e+06
## [3941,] -1.202093e+05 -5.186433e+03 -2.858660e+10 -5.557127e+06
## [3942,] -9.949579e+07 -9.477858e+07 -1.777627e+11 -1.134413e+07
```

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## [3944,] -2.518759e+11 -2.113163e+11 -8.068177e+14 -1.911699e+09
## [3945,] -4.397248e+09 -3.885592e+09 -1.345430e+13 -7.558903e+07
## [3946,] -3.736593e+06 -2.251392e+06 -6.682371e+10 -5.059876e+06
## [3947,] -1.129879e+05 -4.961144e+02 -2.860293e+10 -5.723866e+06
## [3948,] -1.021545e+08 -9.713793e+07 -1.778643e+11 -1.145433e+07
## [3949,] -3.254716e+11 -2.793771e+11 -1.065707e+15 -2.995835e+09
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## [3952,] -3.644757e+06 -2.246808e+06 -6.690006e+10 -5.060041e+06
## [3953,] -9.921610e+04 -4.861664e+03 -2.863561e+10 -5.740581e+06
## [3954,] -1.002591e+08 -9.021948e+07 -1.780675e+11 -1.131123e+07
## [3955,] -3.180694e+11 -2.696108e+11 -1.066315e+15 -2.582578e+09
## [3956,] -2.743377e+11 -2.188384e+11 -8.077395e+14 -3.087419e+09
## [3957,] -4.551573e+09 -3.756485e+09 -1.347736e+13 -9.636157e+07
## [3958,] -3.756590e+06 -4.388230e+06 -6.693825e+10 -4.946686e+06
## [3959,] -1.734529e+05 -1.693908e+05 -2.866831e+10 -5.661201e+06
## [3960,] -9.345962e+07 -9.485299e+07 -1.782708e+11 -1.171953e+07
## [3961,] -3.427050e+11 -2.600167e+11 -1.068142e+15 -3.203012e+09
## [3962,] -2.502463e+11 -2.342781e+11 -8.091232e+14 -2.416116e+09
## [3963,] -4.722829e+09 -4.017655e+09 -1.349275e+13 -7.878239e+07
## [3964,] -3.721837e+06 -1.815712e+06 -6.701466e+10 -4.828138e+06
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## [3966,] -1.007850e+08 -9.958727e+07 -1.783725e+11 -1.162663e+07
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## [3969,] -4.151532e+09 -4.151532e+09 -1.350044e+13 -8.679341e+07
## [3970,] -4.223962e+06 -2.020091e+06 -6.705289e+10 -4.913811e+06
## [3971,] -2.837540e+05 -4.571802e+04 -2.870102e+10 -5.680162e+06
## [3972,] -9.258054e+07 -1.020208e+08 -1.785761e+11 -1.100102e+07
## [3973,] -3.212267e+11 -2.793722e+11 -1.069361e+15 -2.687432e+09
## [3974,] -2.650654e+11 -2.039188e+11 -8.105081e+14 -2.182590e+09
## [3975,] -4.453763e+09 -4.017946e+09 -1.351584e+13 -9.479909e+07
## [3976,] -4.035887e+06 -2.461543e+06 -6.712937e+10 -4.957052e+06
## [3977,] -1.257072e+05 -4.243656e+03 -2.873376e+10 -5.753155e+06
## [3978,] -1.054645e+08 -9.260995e+07 -1.787797e+11 -1.130696e+07
## [3979,] -2.923253e+11 -3.097091e+11 -1.070580e+15 -3.245000e+09
## [3980,] -2.518690e+11 -1.689328e+11 -8.109700e+14 -2.480028e+09
## [3981,] -5.074829e+09 -3.886449e+09 -1.352354e+13 -8.528262e+07
## [3982,] -4.849223e+06 -2.459146e+06 -6.716762e+10 -4.910748e+06
## [3983,] -8.943787e+04 -1.656379e+05 -2.876651e+10 -5.624716e+06
## [3984,] -1.011022e+08 -9.262466e+07 -1.788815e+11 -1.204815e+07
## [3985,] -3.514856e+11 -3.097082e+11 -1.071190e+15 -2.934188e+09
## [3986,] -2.600760e+11 -2.502425e+11 -8.114321e+14 -2.258895e+09
## [3987,] -4.510125e+09 -4.018236e+09 -1.353896e+13 -8.803913e+07
## [3988,] -3.790791e+06 -2.226238e+06 -6.724417e+10 -4.997229e+06
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## [3990,] -1.033107e+08 -9.265408e+07 -1.790853e+11 -1.150025e+07
## [3991,] -3.297295e+11 -2.696029e+11 -1.072410e+15 -2.755097e+09
## [3992,] -2.218768e+11 -2.502402e+11 -8.128189e+14 -2.627273e+09
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## [3994,] -3.695349e+06 -2.002752e+06 -6.735906e+10 -5.101378e+06
## [3995,] -1.123928e+05 -3.667690e+03 -2.883208e+10 -5.784605e+06
## [3996,] -1.021289e+08 -8.813265e+07 -1.792892e+11 -1.136492e+07
## [3997,] -3.307989e+11 -2.793666e+11 -1.073632e+15 -3.025427e+09
## [3998,] -2.617295e+11 -2.188291e+11 -8.137442e+14 -1.939168e+09
## [3999,] -4.496488e+09 -3.887021e+09 -1.356981e+13 -7.469901e+07
## [4000,] -3.692412e+06 -2.217126e+06 -6.739739e+10 -5.071185e+06
```



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## [4002,] -1.031297e+08 -9.271293e+07 -1.794933e+11 -1.174136e+07
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## [4014,] -1.043641e+08 -9.043735e+07 -1.795953e+11 -1.149370e+07
## [4015,] -3.138655e+11 -3.307963e+11 -1.075464e+15 -3.372959e+09
## [4016,] -2.486159e+11 -2.039119e+11 -8.151330e+14 -2.407173e+09
## [4017,] -4.724194e+09 -4.426884e+09 -1.359297e+13 -8.120669e+07
## [4018,] -4.278412e+06 -3.186328e+06 -6.751241e+10 -5.027859e+06
## [4019,] -1.561858e+05 -3.219833e+03 -2.891414e+10 -5.636400e+06
## [4020,] -1.034195e+08 -8.820440e+07 -1.797995e+11 -1.174067e+07
## [4021,] -3.222736e+11 -2.793625e+11 -1.076687e+15 -3.076484e+09
## [4022,] -2.413882e+11 -2.113030e+11 -8.155962e+14 -2.335995e+09
## [4023,] -4.511049e+09 -3.758077e+09 -1.360842e+13 -7.549082e+07
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## [4032,] -9.870011e+07 -8.829054e+07 -1.804128e+11 -1.149458e+07
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## [4035,] -4.330732e+09 -3.888069e+09 -1.365482e+13 -9.043077e+07
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## [4038,] -1.069655e+08 -9.286015e+07 -1.805151e+11 -1.195047e+07
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## [4041,] -4.441637e+09 -4.568081e+09 -1.365482e+13 -9.856847e+07
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## [4049,] -5.581487e+04 -2.487262e+03 -2.906214e+10 -5.624803e+06
## [4050,] -1.102396e+08 -8.833363e+07 -1.807199e+11 -1.201075e+07
## [4051,] -3.111740e+11 -2.917315e+11 -2.831586e+13 -1.398965e+09
## [4052,] -2.460164e+11 -2.059521e+11 -2.144941e+13 -1.324294e+09
## [4053,] -4.226825e+09 -3.486688e+09 -3.576853e+11 -2.702479e+07
## [4054,] -1.704012e+07 -1.398874e+07 -1.776522e+09 -9.702580e+03
## [4055,] -6.710883e+06 -4.896454e+06 -7.604146e+08 -4.563049e+04
## [4056,] -6.189696e+07 -4.758493e+07 -4.728558e+09 -9.596172e+05
## [4057,] -3.280330e+11 -2.528500e+11 -2.831586e+13 -1.800774e+09
## [4058,] -2.452124e+11 -1.986554e+11 -2.144941e+13 -1.348014e+09
```

```
## [4059,] -4.186095e+09 -3.364179e+09 -3.576853e+11 -2.768165e+07
## [4060,] -1.791304e+07 -1.343642e+07 -1.776522e+09 -1.154532e+04
## [4061,] -7.334757e+06 -4.896454e+06 -7.604146e+08 -4.926283e+04
## [4062,] -6.379419e+07 -5.094407e+07 -4.728558e+09 -9.525967e+05
## [4063,] -3.333926e+11 -2.917315e+11 -2.831586e+13 -1.571293e+09
## [4064,] -2.648722e+11 -2.133805e+11 -2.144941e+13 -1.175242e+09
## [4065,] -4.308875e+09 -3.243861e+09 -3.576853e+11 -2.468377e+07
## [4066,] -1.716349e+07 -1.512675e+07 -1.776522e+09 -1.286280e+04
## [4067,] -7.149929e+06 -5.115969e+06 -7.604146e+08 -5.124215e+04
## [4068,] -6.152096e+07 -5.266660e+07 -4.728558e+09 -9.110151e+05
## [4069,] -3.409691e+11 -2.719433e+11 -2.831586e+13 -1.586105e+09
## [4070,] -2.607139e+11 -1.986554e+11 -2.144941e+13 -1.197594e+09
## [4071,] -4.267751e+09 -3.364179e+09 -3.576853e+11 -2.499676e+07
## [4072,] -1.716349e+07 -1.289523e+07 -1.776522e+09 -1.203103e+04
## [4073,] -7.176189e+06 -5.340298e+06 -7.604146e+08 -5.102030e+04
## [4074,] -6.133338e+07 -5.266660e+07 -4.728558e+09 -9.087322e+05
## [4075,] -3.377116e+11 -2.719433e+11 -2.831586e+13 -1.593537e+09
## [4076,] -2.500563e+11 -2.286319e+11 -2.144941e+13 -1.191986e+09
## [4077,] -4.226825e+09 -3.611388e+09 -3.576853e+11 -2.478788e+07
## [4078,] -1.823008e+07 -1.455218e+07 -1.776522e+09 -1.337521e+04
## [4079,] -6.634848e+06 -5.115969e+06 -7.604146e+08 -4.969931e+04
## [4080,] -6.436894e+07 -5.441776e+07 -4.728558e+09 -9.087322e+05
## [4081,] -3.096921e+11 -2.793545e+11 -1.082812e+15 -3.106727e+09
## [4082,] -2.374118e+11 -2.188191e+11 -8.202355e+14 -2.113434e+09
## [4083,] -4.497923e+09 -3.758920e+09 -1.367805e+13 -7.948109e+07
## [4084,] -3.795315e+06 -2.185382e+06 -6.793503e+10 -5.095884e+06
## [4085,] -1.857173e+05 -9.482311e+03 -2.909508e+10 -5.709156e+06
## [4086,] -1.019078e+08 -8.837672e+07 -1.810272e+11 -1.159893e+07
## [4087,] -3.705037e+11 -2.892916e+11 -1.084039e+15 -2.942552e+09
## [4088,] -2.366197e+11 -2.584069e+11 -8.216299e+14 -2.203665e+09
## [4089,] -4.372763e+09 -4.428307e+09 -1.370131e+13 -8.329916e+07
## [4090,] -3.992285e+06 -2.641181e+06 -6.805051e+10 -5.035703e+06
## [4091,] -6.642120e+04 -1.929252e+05 -2.912804e+10 -5.765830e+06
## [4092,] -1.048433e+08 -9.294853e+07 -1.811297e+11 -1.152275e+07
## [4093,] -3.459621e+11 -2.695870e+11 -1.084652e+15 -3.200677e+09
## [4094,] -2.551186e+11 -2.342581e+11 -8.216299e+14 -2.414088e+09
## [4095,] -4.372763e+09 -4.711286e+09 -1.370131e+13 -8.716398e+07
## [4096,] -3.725612e+06 -3.415646e+06 -6.808903e+10 -5.052535e+06
## [4097,] -5.402426e+04 -2.121152e+03 -2.914453e+10 -5.762432e+06
## [4098,] -1.024225e+08 -8.840546e+07 -1.812322e+11 -1.174838e+07
## [4099,] -3.265079e+11 -2.599949e+11 -1.085266e+15 -2.637293e+09
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## [4101,] -4.262826e+09 -4.428409e+09 -1.370906e+13 -8.973759e+07
## [4102,] -3.303490e+06 -3.142829e+06 -6.812756e+10 -5.194417e+06
## [4103,] -6.070495e+04 -8.896535e+03 -2.916102e+10 -5.889265e+06
## [4104,] -1.005093e+08 -1.000300e+08 -1.813347e+11 -1.146009e+07
## [4105,] -2.872875e+11 -3.201477e+11 -1.085881e+15 -3.393131e+09
## [4106,] -2.709238e+11 -2.342567e+11 -8.225601e+14 -2.158065e+09
## [4107,] -4.512589e+09 -3.759482e+09 -1.372458e+13 -7.881775e+07
## [4108,] -3.719714e+06 -1.754458e+06 -6.816610e+10 -5.153786e+06
## [4109,] -1.082509e+05 -8.753010e+03 -2.917752e+10 -5.668876e+06
## [4110,] -1.024535e+08 -8.843420e+07 -1.814373e+11 -1.183284e+07
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## [4112,] -2.734614e+11 -2.188141e+11 -8.234909e+14 -2.165466e+09
## [4113,] -4.856488e+09 -3.889022e+09 -1.373234e+13 -8.335496e+07
## [4114,] -4.470440e+06 -1.955453e+06 -6.820465e+10 -5.066203e+06
## [4115,] -1.210161e+05 -2.011912e+04 -2.919402e+10 -5.827794e+06
## [4116,] -1.024689e+08 -8.621208e+07 -1.815399e+11 -1.169852e+07
```

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## [4117,] -3.222580e+11 -2.695830e+11 -1.087724e+15 -2.831891e+09
## [4118,] -2.559348e+11 -2.038988e+11 -8.239565e+14 -2.002493e+09
## [4119,] -4.625992e+09 -4.020756e+09 -1.374010e+13 -8.375162e+07
## [4120,] -3.800557e+06 -1.953316e+06 -6.824321e+10 -5.049513e+06
## [4121,] -1.811358e+05 -3.614976e+04 -2.921052e+10 -5.798360e+06
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## [4124,] -2.502211e+11 -2.038981e+11 -8.244222e+14 -1.923364e+09
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## [4126,] -3.622268e+06 -2.870998e+06 -6.832036e+10 -5.266474e+06
## [4127,] -2.192333e+05 -1.947414e+04 -2.924355e+10 -5.758537e+06
## [4128,] -9.328270e+07 -1.099138e+08 -1.818479e+11 -1.211902e+07
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## [4130,] -2.518453e+11 -1.966369e+11 -8.253540e+14 -2.608560e+09
## [4131,] -4.087787e+09 -4.291005e+09 -1.377118e+13 -7.760299e+07
## [4132,] -3.644874e+06 -2.618875e+06 -6.839756e+10 -5.164450e+06
## [4133,] -1.117175e+05 -3.653341e+02 -2.927659e+10 -5.886655e+06
## [4134,] -1.028043e+08 -8.629724e+07 -1.821562e+11 -1.218506e+07
## [4135,] -3.286337e+11 -2.599879e+11 -1.090800e+15 -3.403285e+09
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## [4138,] -3.501020e+06 -2.616402e+06 -6.843618e+10 -5.086863e+06
## [4139,] -1.145032e+05 -1.535727e+03 -2.929312e+10 -5.864198e+06
## [4140,] -1.032902e+08 -9.080106e+07 -1.821562e+11 -1.172991e+07
## [4141,] -3.383212e+11 -2.993949e+11 -1.090800e+15 -3.490833e+09
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## [4146,] -9.496734e+07 -9.543436e+07 -1.822590e+11 -1.204045e+07
## [4147,] -3.329210e+11 -2.892818e+11 -1.091415e+15 -3.414078e+09
## [4148,] -2.658730e+11 -2.188084e+11 -8.272192e+14 -2.349851e+09
## [4149,] -4.626720e+09 -4.021434e+09 -1.379451e+13 -8.851298e+07
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## [4159,] -3.339939e+11 -2.793399e+11 -1.093880e+15 -2.626632e+09
## [4160,] -2.421648e+11 -2.038919e+11 -8.286195e+14 -2.599736e+09
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## [4162,] -3.237821e+06 -2.142667e+06 -6.866810e+10 -5.202390e+06
## [4163,] -1.249065e+05 -3.302434e+04 -2.939239e+10 -5.791591e+06
## [4164,] -1.004992e+08 -8.639665e+07 -1.828765e+11 -1.165192e+07
## [4165,] -3.180281e+11 -2.599817e+11 -1.095730e+15 -3.084200e+09
## [4166,] -2.469756e+11 -2.038891e+11 -8.304884e+14 -1.915386e+09
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## [4171,] -3.264913e+11 -2.695711e+11 -1.096964e+15 -2.635802e+09
## [4172,] -2.534662e+11 -2.112791e+11 -8.314236e+14 -2.278948e+09
## [4173,] -4.570871e+09 -4.292207e+09 -1.386462e+13 -8.609887e+07
## [4174,] -3.781989e+06 -2.354827e+06 -6.886167e+10 -5.216426e+06
```

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## [4176,] -9.652195e+07 -1.027321e+08 -1.832887e+11 -1.209354e+07
## [4177,] -3.243629e+11 -2.892727e+11 -1.098199e+15 -3.022066e+09
## [4178,] -2.445605e+11 -2.264558e+11 -8.318914e+14 -2.232644e+09
## [4179,] -4.642010e+09 -3.508887e+09 -1.387243e+13 -8.246184e+07
## [4180,] -4.044488e+06 -2.586822e+06 -6.890041e+10 -5.124933e+06
## [4181,] -4.472362e+04 -3.137912e+04 -2.949183e+10 -5.837361e+06
## [4182,] -9.796813e+07 -9.328772e+07 -1.834950e+11 -1.172418e+07
## [4183,] -3.117480e+11 -3.096700e+11 -1.098817e+15 -2.870233e+09
## [4184,] -2.559209e+11 -2.112777e+11 -8.323594e+14 -2.224913e+09
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## [4186,] -3.519689e+06 -2.127036e+06 -6.893917e+10 -5.111518e+06
## [4187,] -6.456744e+04 -6.008762e+03 -2.952501e+10 -5.783238e+06
## [4188,] -1.067131e+08 -9.101964e+07 -1.837014e+11 -1.166915e+07
## [4189,] -3.329078e+11 -2.599754e+11 -1.100671e+15 -2.840109e+09
## [4190,] -2.502050e+11 -2.038836e+11 -8.342325e+14 -2.044769e+09
## [4191,] -4.279103e+09 -4.156752e+09 -1.391146e+13 -7.528132e+07
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## [4197,] -4.757545e+09 -3.761919e+09 -1.392709e+13 -7.805732e+07
## [4198,] -3.933750e+06 -2.569645e+06 -6.917194e+10 -5.048139e+06
## [4199,] -1.179837e+05 -1.017350e+05 -2.960805e+10 -5.799266e+06
## [4200,] -1.062822e+08 -9.805891e+07 -1.841146e+11 -1.211109e+07
## [4201,] -3.275494e+11 -2.892670e+11 -1.102527e+15 -3.283056e+09
## [4202,] -2.485831e+11 -2.342367e+11 -8.351698e+14 -2.427872e+09
## [4203,] -4.320482e+09 -4.431257e+09 -1.392709e+13 -9.054134e+07
## [4204,] -3.334227e+06 -1.900283e+06 -6.921077e+10 -5.200159e+06
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## [4209,] -4.320683e+09 -4.293208e+09 -1.394273e+13 -7.753039e+07
## [4210,] -3.865785e+06 -2.806625e+06 -6.928847e+10 -5.272003e+06
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## [4212,] -9.859416e+07 -1.005044e+08 -1.845282e+11 -1.171915e+07
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## [4214,] -2.437506e+11 -2.038795e+11 -8.370461e+14 -1.879122e+09
## [4215,] -4.729133e+09 -3.762294e+09 -1.395838e+13 -8.491350e+07
## [4216,] -3.516135e+06 -2.102589e+06 -6.936622e+10 -5.139446e+06
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## [4220,] -2.534554e+11 -2.187920e+11 -8.379850e+14 -2.224048e+09
## [4221,] -4.859790e+09 -4.157540e+09 -1.397404e+13 -8.571512e+07
## [4222,] -3.711701e+06 -1.889764e+06 -6.940510e+10 -5.068763e+06
## [4223,] -1.424187e+05 -8.931715e+02 -2.972451e+10 -5.996802e+06
## [4224,] -1.066396e+08 -8.666676e+07 -1.848387e+11 -1.197381e+07
## [4225,] -3.275433e+11 -2.793230e+11 -1.106863e+15 -2.849235e+09
## [4226,] -2.469627e+11 -2.038774e+11 -8.384546e+14 -1.693848e+09
## [4227,] -4.743855e+09 -3.762575e+09 -1.398187e+13 -8.399379e+07
## [4228,] -3.566521e+06 -2.098160e+06 -6.944400e+10 -4.915545e+06
## [4229,] -8.268734e+04 -3.193306e+02 -2.975782e+10 -5.980272e+06
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```

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## [4241,] -5.314695e+04 -4.448479e+04 -2.982450e+10 -6.000036e+06
## [4242,] -1.025878e+08 -8.901001e+07 -1.855643e+11 -1.178795e+07
## [4243,] -3.318182e+11 -2.599622e+11 -1.111208e+15 -2.809008e+09
## [4244,] -2.264405e+11 -2.501928e+11 -8.417459e+14 -2.285092e+09
## [4245,] -4.558999e+09 -4.432682e+09 -1.403676e+13 -8.180415e+07
## [4246,] -3.244094e+06 -3.862060e+06 -6.971660e+10 -5.089594e+06
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## [4248,] -1.030887e+08 -9.129687e+07 -1.856680e+11 -1.205767e+07
## [4249,] -2.963147e+11 -2.892546e+11 -1.111830e+15 -3.133951e+09
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## [4255,] -2.932777e+11 -3.307436e+11 -1.112451e+15 -3.565156e+09
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## [4260,] -1.036064e+08 -9.362753e+07 -1.858757e+11 -1.207660e+07
## [4261,] -3.558579e+11 -2.993648e+11 -1.113073e+15 -3.102554e+09
## [4262,] -2.469544e+11 -2.112608e+11 -8.436296e+14 -2.207911e+09
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## [4271,] -7.835124e+04 -1.171272e+04 -2.992467e+10 -6.027335e+06
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## [4432,] -3.865184e+06 -1.600116e+06 -7.120573e+10 -5.320764e+06
## [4433,] -2.260548e+05 -3.280255e+04 -3.047859e+10 -6.018671e+06
## [4434,] -1.019649e+08 -9.183797e+07 -1.895279e+11 -1.195506e+07
## [4435,] -3.580532e+11 -2.792866e+11 -1.134943e+15 -2.865487e+09
## [4436,] -2.750991e+11 -2.112369e+11 -8.597254e+14 -2.077850e+09
## [4437,] -4.648156e+09 -3.639417e+09 -1.433658e+13 -9.432397e+07
## [4438,] -3.352558e+06 -2.213942e+06 -7.124513e+10 -5.173929e+06
## [4439,] -7.483261e+04 -1.723922e+04 -3.049545e+10 -6.158013e+06
## [4440,] -9.767640e+07 -1.012566e+08 -1.896327e+11 -1.195207e+07
## [4441,] -3.044555e+11 -3.200786e+11 -1.135571e+15 -3.299797e+09
## [4442,] -2.501622e+11 -2.187577e+11 -8.606769e+14 -2.251275e+09
## [4443,] -5.026835e+09 -3.896555e+09 -1.435245e+13 -9.013198e+07
## [4444,] -3.625410e+06 -1.993247e+06 -7.132396e+10 -5.307264e+06
## [4445,] -7.669182e+04 -3.197749e+04 -3.052919e+10 -6.051627e+06
## [4446,] -9.747019e+07 -1.037103e+08 -1.898426e+11 -1.241381e+07
## [4447,] -3.469837e+11 -2.993331e+11 -1.136828e+15 -2.925419e+09
## [4448,] -2.566950e+11 -1.852448e+11 -8.611529e+14 -1.847745e+09
## [4449,] -4.734494e+09 -3.514502e+09 -1.436038e+13 -7.476667e+07
## [4450,] -2.924590e+06 -2.436670e+06 -7.132396e+10 -5.396983e+06
## [4451,] -6.125593e+04 -3.197749e+04 -3.052919e+10 -6.046801e+06
## [4452,] -1.034823e+08 -8.961662e+07 -1.899475e+11 -1.228462e+07
## [4453,] -3.243081e+11 -2.892210e+11 -1.137456e+15 -2.955660e+09
## [4454,] -2.295083e+11 -2.038436e+11 -8.616290e+14 -1.997026e+09
## [4455,] -4.605855e+09 -3.767170e+09 -1.436832e+13 -8.391274e+07
## [4456,] -3.820963e+06 -1.590464e+06 -7.140283e+10 -5.232103e+06
## [4457,] -1.252416e+05 -9.114829e+02 -3.056296e+10 -6.037432e+06
## [4458,] -1.081756e+08 -8.963109e+07 -1.900525e+11 -1.240772e+07
## [4459,] -3.096164e+11 -2.892201e+11 -1.138085e+15 -2.688301e+09
## [4460,] -2.302854e+11 -2.501599e+11 -8.621052e+14 -2.336524e+09
## [4461,] -4.312453e+09 -4.028609e+09 -1.437626e+13 -9.257665e+07
## [4462,] -2.793327e+06 -2.919365e+06 -7.140283e+10 -5.242344e+06
## [4463,] -5.577156e+04 -9.114829e+02 -3.056296e+10 -6.146406e+06
## [4464,] -9.586812e+07 -9.423481e+07 -1.901575e+11 -1.222829e+07
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## [4466,] -2.525986e+11 -2.038415e+11 -8.630581e+14 -1.861454e+09
## [4467,] -4.451216e+09 -3.897032e+09 -1.439215e+13 -7.627507e+07
## [4468,] -3.756946e+06 -2.427137e+06 -7.148175e+10 -5.522796e+06
## [4469,] -5.975234e+04 -4.244340e+02 -3.059674e+10 -6.166162e+06
## [4470,] -1.045053e+08 -8.518496e+07 -1.902626e+11 -1.193414e+07
## [4471,] -3.339294e+11 -2.505108e+11 -1.139343e+15 -2.775825e+09
## [4472,] -2.485382e+11 -2.187541e+11 -8.630581e+14 -2.099604e+09
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## [4474,] -3.844181e+06 -2.427137e+06 -7.148175e+10 -5.508783e+06
## [4475,] -5.701267e+04 -5.298645e+02 -3.061363e+10 -5.971731e+06
## [4476,] -1.047813e+08 -9.427933e+07 -1.904728e+11 -1.231981e+07
## [4477,] -3.382501e+11 -3.200716e+11 -1.140601e+15 -3.036865e+09
## [4478,] -2.591622e+11 -2.187527e+11 -8.640115e+14 -2.174458e+09
## [4479,] -4.563851e+09 -3.640247e+09 -1.440805e+13 -8.188585e+07
## [4480,] -3.384872e+06 -1.775981e+06 -7.156072e+10 -5.404427e+06
## [4481,] -6.598082e+04 -5.164455e+03 -3.064744e+10 -6.172676e+06
## [4482,] -9.876146e+07 -9.899945e+07 -1.905779e+11 -1.238406e+07
## [4483,] -3.339267e+11 -2.505085e+11 -1.141231e+15 -2.261746e+09
## [4484,] -2.397188e+11 -2.421077e+11 -8.644884e+14 -2.250695e+09
## [4485,] -4.479499e+09 -4.163061e+09 -1.441600e+13 -8.342220e+07
## [4486,] -3.382061e+06 -2.193523e+06 -7.160022e+10 -5.380267e+06
## [4487,] -4.524871e+04 -1.753548e+05 -3.064744e+10 -6.053808e+06
## [4488,] -1.055490e+08 -9.430901e+07 -1.906830e+11 -1.189741e+07
## [4489,] -3.480754e+11 -2.892152e+11 -1.141861e+15 -3.140283e+09
## [4490,] -2.641397e+11 -2.187512e+11 -8.649654e+14 -2.343928e+09
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## [4496,] -2.542266e+11 -1.965779e+11 -8.663973e+14 -1.896151e+09
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## [4501,] -3.096087e+11 -2.993239e+11 -1.143751e+15 -3.057021e+09
## [4502,] -2.501531e+11 -2.112271e+11 -8.663973e+14 -2.618351e+09
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## [4520,] -2.349699e+11 -2.421009e+11 -8.687864e+14 -2.446543e+09
## [4521,] -4.313858e+09 -4.438483e+09 -1.448768e+13 -9.057792e+07
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## [4525,] -3.179574e+11 -2.695077e+11 -1.146905e+15 -3.406135e+09
## [4526,] -2.534047e+11 -2.112229e+11 -8.692646e+14 -2.242281e+09
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## [4547,] -1.213991e+05 -2.248077e+02 -3.090160e+10 -6.107918e+06
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## [4549,] -3.349906e+11 -2.792656e+11 -1.151328e+15 -2.953832e+09
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## [4557,] -4.551782e+09 -4.164934e+09 -1.456752e+13 -9.680350e+07
## [4558,] -3.749603e+06 -2.610473e+06 -7.235275e+10 -5.440870e+06
## [4559,] -5.407400e+04 -1.435277e+02 -3.096955e+10 -6.159507e+06
## [4560,] -1.046043e+08 -9.457634e+07 -1.925809e+11 -1.237676e+07
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## [4562,] -2.477133e+11 -2.187384e+11 -8.735744e+14 -1.860004e+09
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## [4570,] -3.427292e+06 -2.141773e+06 -7.251168e+10 -5.493528e+06
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## [4579,] -3.274742e+11 -2.792592e+11 -1.156392e+15 -2.599763e+09
## [4580,] -2.574929e+11 -2.187341e+11 -8.764535e+14 -2.264296e+09
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## [4583,] -2.090332e+03 -1.223809e+05 -3.108865e+10 -6.093702e+06
## [4584,] -1.030220e+08 -9.009468e+07 -1.934274e+11 -1.231880e+07
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## [4604,] -2.566633e+11 -2.666210e+11 -8.807810e+14 -2.240545e+09
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## [4612,] -3.014339e+06 -2.810723e+06 -7.306931e+10 -5.452854e+06
## [4613,] -7.439013e+04 -2.108411e+04 -3.127627e+10 -6.247573e+06
## [4614,] -1.043962e+08 -8.798063e+07 -1.944882e+11 -1.249064e+07
## [4615,] -3.221513e+11 -2.694854e+11 -1.164647e+15 -2.560880e+09
## [4616,] -2.468921e+11 -2.038132e+11 -8.827078e+14 -2.741632e+09
## [4617,] -4.913732e+09 -3.643844e+09 -1.471983e+13 -8.472242e+07
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## [4619,] -3.714439e+04 -1.740371e+01 -3.131044e+10 -6.228251e+06
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## [4622,] -2.310316e+11 -2.501255e+11 -8.836720e+14 -2.541396e+09
## [4623,] -4.399886e+09 -3.771486e+09 -1.473591e+13 -8.746994e+07
## [4624,] -2.704041e+06 -2.803042e+06 -7.318908e+10 -5.362925e+06
## [4625,] -4.686882e+04 -2.335957e+01 -3.132753e+10 -6.088391e+06
## [4626,] -1.000869e+08 -1.044431e+08 -1.948069e+11 -1.323662e+07
## [4627,] -3.328152e+11 -2.891831e+11 -1.166556e+15 -3.116098e+09
## [4628,] -2.632760e+11 -1.894268e+11 -8.836720e+14 -2.444200e+09
## [4629,] -4.596528e+09 -3.644121e+09 -1.474395e+13 -8.553728e+07
## [4630,] -3.742267e+06 -3.055659e+06 -7.322902e+10 -5.554677e+06
## [4631,] -4.208771e+04 -3.015232e+03 -3.136173e+10 -6.340589e+06
## [4632,] -1.010930e+08 -9.965439e+07 -1.951260e+11 -1.215319e+07
## [4633,] -3.328126e+11 -2.694807e+11 -1.168466e+15 -2.674849e+09
## [4634,] -2.517486e+11 -2.341590e+11 -8.851193e+14 -2.468094e+09
## [4635,] -4.497926e+09 -4.033266e+09 -1.476004e+13 -7.873677e+07
## [4636,] -3.621919e+06 -2.097274e+06 -7.330894e+10 -5.401244e+06
## [4637,] -1.064484e+05 -8.245992e+03 -3.139595e+10 -6.373033e+06
## [4638,] -1.059787e+08 -9.729464e+07 -1.952324e+11 -1.259634e+07
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## [4639,] -3.126939e+11 -2.792430e+11 -1.169103e+15 -2.911139e+09
## [4640,] -2.493118e+11 -2.111990e+11 -8.856020e+14 -1.928952e+09
## [4641,] -3.993579e+09 -5.017632e+09 -1.476809e+13 -8.733139e+07
## [4642,] -4.239429e+06 -2.316522e+06 -7.334892e+10 -5.551421e+06
## [4643,] -5.662654e+04 -8.245992e+03 -3.139595e+10 -6.176420e+06
## [4644,] -1.064720e+08 -9.494827e+07 -1.952324e+11 -1.253695e+07
## [4645,] -3.491371e+11 -3.095747e+11 -1.169103e+15 -2.931288e+09
## [4646,] -2.493118e+11 -2.111990e+11 -8.856020e+14 -2.286126e+09
## [4647,] -4.739859e+09 -4.167400e+09 -1.476809e+13 -8.538615e+07
## [4648,] -3.791267e+06 -3.878897e+06 -7.334892e+10 -5.526848e+06
## [4649,] -1.032714e+05 -1.745770e+03 -3.139595e+10 -6.266970e+06
## [4650,] -1.094561e+08 -9.729464e+07 -1.952324e+11 -1.244391e+07
## [4651,] -3.502394e+11 -2.992904e+11 -1.169103e+15 -2.901091e+09
## [4652,] -2.599537e+11 -2.263736e+11 -8.856020e+14 -2.178818e+09
## [4653,] -4.582657e+09 -4.442047e+09 -1.476809e+13 -8.499973e+07
## [4654,] -3.099952e+06 -2.316522e+06 -7.334892e+10 -5.301266e+06
## [4655,] -2.195196e+05 -5.886114e+01 -3.139595e+10 -6.279258e+06
## [4656,] -1.045056e+08 -9.263055e+07 -1.952324e+11 -1.285245e+07
## [4657,] -3.360455e+11 -2.598905e+11 -1.169103e+15 -3.074278e+09
## [4658,] -2.493118e+11 -2.263736e+11 -8.856020e+14 -2.239821e+09
## [4659,] -4.958496e+09 -3.901517e+09 -1.476809e+13 -9.229035e+07
## [4660,] -3.534384e+06 -2.316522e+06 -7.334892e+10 -5.304701e+06
## [4661,] -3.756379e+04 -3.185265e+03 -3.139595e+10 -6.108334e+06
## [4662,] -1.049955e+08 -9.966964e+07 -1.952324e+11 -1.258784e+07
## [4663,] -3.064712e+11 -2.694799e+11 -1.169103e+15 -3.446648e+09
## [4664,] -2.550144e+11 -2.501225e+11 -8.856020e+14 -2.163699e+09
## [4665,] -4.682492e+09 -4.167499e+09 -1.477614e+13 -7.581951e+07
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## [4668,] -1.069981e+08 -9.732479e+07 -1.954453e+11 -1.269231e+07
## [4669,] -3.760690e+11 -2.694783e+11 -1.170378e+15 -3.084452e+09
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## [4671,] -4.582864e+09 -3.606769e+09 -1.478419e+13 -7.933582e+07
## [4672,] -2.888218e+06 -2.090640e+06 -7.342891e+10 -5.576223e+06
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## [4674,] -1.008986e+08 -1.045368e+08 -1.954453e+11 -1.278627e+07
## [4675,] -3.075014e+11 -3.095722e+11 -1.171016e+15 -2.791462e+09
## [4676,] -2.388900e+11 -2.501202e+11 -8.870508e+14 -2.379934e+09
## [4677,] -4.484307e+09 -4.303929e+09 -1.479225e+13 -9.273713e+07
## [4678,] -3.065713e+06 -2.541792e+06 -7.346892e+10 -5.373888e+06
## [4679,] -2.171897e+04 -9.774938e+01 -3.144731e+10 -6.362319e+06
## [4680,] -1.062882e+08 -9.039957e+07 -1.956583e+11 -1.233906e+07
## [4681,] -3.338843e+11 -2.504718e+11 -1.171654e+15 -2.597893e+09
## [4682,] -2.484986e+11 -2.187169e+11 -8.880173e+14 -2.118306e+09
## [4683,] -4.498541e+09 -3.772331e+09 -1.480837e+13 -7.697070e+07
## [4684,] -2.931284e+06 -1.874249e+06 -7.354897e+10 -5.647152e+06
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## [4696,] -4.819519e+06 -2.532056e+06 -7.362907e+10 -5.520440e+06
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## [4700,] -2.517417e+11 -2.111934e+11 -8.894682e+14 -2.231572e+09
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## [4705,] -3.480276e+11 -2.891716e+11 -1.175485e+15 -2.920379e+09
## [4706,] -2.428659e+11 -1.965440e+11 -8.904360e+14 -2.007441e+09
## [4707,] -4.755335e+09 -3.520031e+09 -1.484870e+13 -8.825914e+07
## [4708,] -3.819649e+06 -2.767335e+06 -7.374930e+10 -5.496193e+06
## [4709,] -6.004407e+04 -2.293621e+02 -3.156733e+10 -6.288053e+06
## [4710,] -1.046619e+08 -1.046619e+08 -1.962981e+11 -1.256565e+07
## [4711,] -3.355487e+11 -3.122146e+11 -2.831586e+13 -1.571293e+09
## [4712,] -2.436083e+11 -2.364550e+11 -2.144941e+13 -1.231517e+09
## [4713,] -4.475341e+09 -3.364179e+09 -3.576853e+11 -2.406371e+07
## [4714,] -1.778700e+07 -1.236516e+07 -1.776522e+09 -1.286280e+04
## [4715,] -7.304077e+06 -4.893072e+06 -7.630804e+08 -5.544650e+04
## [4716,] -5.820009e+07 -6.172082e+07 -4.745135e+09 -8.942769e+05
## [4717,] -3.008621e+11 -3.333918e+11 -2.841513e+13 -1.549144e+09
## [4718,] -2.549468e+11 -1.986548e+11 -2.152461e+13 -1.377905e+09
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## [4733,] -6.753868e+06 -5.333237e+06 -7.657508e+08 -5.104585e+04
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## [4735,] -3.387939e+11 -2.528484e+11 -2.851457e+13 -1.563792e+09
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## [4739,] -6.753868e+06 -4.889692e+06 -7.657508e+08 -5.171300e+04
## [4740,] -6.117000e+07 -5.444031e+07 -4.761741e+09 -9.025308e+05
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## [4742,] -2.517394e+11 -2.038015e+11 -8.909201e+14 -1.978403e+09
## [4743,] -4.726719e+09 -3.902663e+09 -1.486485e+13 -8.516889e+07
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## [4745,] -3.944077e+04 -1.687998e+04 -3.161883e+10 -6.294631e+06
## [4746,] -1.044640e+08 -8.603338e+07 -1.966184e+11 -1.245490e+07
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## [4749,] -4.155474e+09 -4.305233e+09 -1.489717e+13 -9.112130e+07
## [4750,] -3.378015e+06 -2.059818e+06 -7.399005e+10 -5.598591e+06
## [4751,] -5.095749e+04 -5.095749e+04 -3.167037e+10 -6.254504e+06
## [4752,] -1.015955e+08 -1.023205e+08 -1.969389e+11 -1.291444e+07
## [4753,] -3.360304e+11 -2.891659e+11 -1.179962e+15 -3.229782e+09
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## [4762,] -4.055683e+06 -2.500540e+06 -7.415076e+10 -5.588355e+06
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## [4767,] -4.613118e+09 -3.646243e+09 -1.492953e+13 -8.800958e+07
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## [4769,] -5.144853e+04 -2.909429e+04 -3.175638e+10 -6.441853e+06
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## [4775,] -6.241115e+04 -1.514051e+04 -3.179081e+10 -6.422233e+06
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## [4777,] -3.231840e+11 -2.992712e+11 -1.183807e+15 -3.543747e+09
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## [4787,] -2.557807e+03 -7.872274e+02 -3.185973e+10 -6.164371e+06
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## [4797,] -4.642326e+09 -3.521572e+09 -1.498624e+13 -8.023803e+07
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## [4799,] -8.418821e+04 -4.181978e+02 -3.187698e+10 -6.384465e+06
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## [4810,] -2.542475e+06 -2.962872e+06 -7.463396e+10 -5.435310e+06
## [4811,] -5.802158e+03 -4.404348e+03 -3.194599e+10 -6.278875e+06
## [4812,] -1.089667e+08 -1.025680e+08 -1.986528e+11 -1.260002e+07
```

```
## [4813,] -3.013065e+11 -3.095475e+11 -1.189586e+15 -3.133863e+09
## [4814,] -2.428494e+11 -2.037870e+11 -9.011173e+14 -1.926804e+09
## [4815,] -4.445308e+09 -3.774866e+09 -1.502682e+13 -7.862709e+07
## [4816,] -3.171831e+06 -2.024873e+06 -7.463396e+10 -5.763526e+06
## [4817,] -3.921650e+04 -6.665237e+03 -3.196326e+10 -6.461021e+06
## [4818,] -1.028415e+08 -9.780785e+07 -1.988675e+11 -1.275577e+07
## [4819,] -3.392647e+11 -3.200033e+11 -1.190872e+15 -2.888267e+09
## [4820,] -2.566292e+11 -2.111751e+11 -9.020915e+14 -2.168832e+09
## [4821,] -4.376102e+09 -3.904859e+09 -1.505119e+13 -8.744005e+07
## [4822,] -3.379476e+06 -2.018354e+06 -7.475500e+10 -5.607302e+06
## [4823,] -1.392864e+04 -4.105504e+03 -3.199780e+10 -6.354512e+06
## [4824,] -1.057903e+08 -9.314607e+07 -1.989750e+11 -1.274414e+07
## [4825,] -2.891511e+11 -2.792147e+11 -1.191515e+15 -3.238819e+09
## [4826,] -2.460556e+11 -2.263481e+11 -9.025787e+14 -2.275824e+09
## [4827,] -4.586279e+09 -4.445613e+09 -1.505119e+13 -8.607523e+07
## [4828,] -3.058438e+06 -3.216955e+06 -7.475500e+10 -5.607302e+06
## [4829,] -1.634039e+04 -1.748082e+04 -3.199780e+10 -6.344622e+06
## [4830,] -1.053142e+08 -9.316082e+07 -1.990824e+11 -1.237636e+07
## [4831,] -3.327799e+11 -2.694513e+11 -1.192158e+15 -2.828311e+09
## [4832,] -2.436465e+11 -1.965264e+11 -9.030662e+14 -1.905233e+09
## [4833,] -4.714961e+09 -4.171052e+09 -1.506745e+13 -8.417215e+07
## [4834,] -3.679033e+06 -2.011846e+06 -7.487615e+10 -5.646484e+06
## [4835,] -3.048150e+04 -7.303448e+03 -3.204966e+10 -6.465482e+06
## [4836,] -1.046256e+08 -9.090886e+07 -1.994050e+11 -1.240092e+07
## [4837,] -2.962057e+11 -3.095407e+11 -1.194734e+15 -3.101956e+09
## [4838,] -2.396560e+11 -2.263445e+11 -9.050172e+14 -2.275459e+09
## [4839,] -4.729661e+09 -4.307640e+09 -1.509185e+13 -8.595196e+07
## [4840,] -2.667175e+06 -2.224414e+06 -7.495696e+10 -5.636030e+06
## [4841,] -7.186416e+03 -1.441554e+03 -3.208425e+10 -6.299694e+06
## [4842,] -9.789856e+07 -9.789856e+07 -1.995125e+11 -1.292585e+07
## [4843,] -3.392593e+11 -2.694482e+11 -1.194734e+15 -2.867775e+09
## [4844,] -2.615786e+11 -2.263438e+11 -9.055052e+14 -2.191056e+09
## [4845,] -4.572734e+09 -3.522842e+09 -1.509999e+13 -7.986760e+07
## [4846,] -2.913728e+06 -1.799685e+06 -7.499739e+10 -5.710726e+06
## [4847,] -2.330999e+04 -1.500062e+03 -3.210155e+10 -6.514655e+06
## [4848,] -1.022228e+08 -9.093800e+07 -1.996201e+11 -1.246233e+07
## [4849,] -3.252912e+11 -2.694474e+11 -1.195378e+15 -2.547752e+09
## [4850,] -2.492805e+11 -2.037808e+11 -9.055052e+14 -1.883716e+09
## [4851,] -4.502232e+09 -3.775711e+09 -1.509999e+13 -7.837802e+07
## [4852,] -3.068496e+06 -2.005348e+06 -7.499739e+10 -5.803779e+06
## [4853,] -2.968636e+04 -7.700389e+03 -3.210155e+10 -6.532197e+06
## [4854,] -1.024649e+08 -9.093800e+07 -1.996201e+11 -1.242012e+07
## [4855,] -3.295575e+11 -2.694474e+11 -1.195378e+15 -2.519604e+09
## [4856,] -2.484711e+11 -1.965230e+11 -9.055052e+14 -1.890764e+09
## [4857,] -4.516288e+09 -3.775711e+09 -1.509999e+13 -7.782304e+07
## [4858,] -3.042423e+06 -2.005348e+06 -7.499739e+10 -5.800186e+06
## [4859,] -7.852244e+04 -2.483188e+04 -3.210155e+10 -6.429788e+06
## [4860,] -1.046725e+08 -9.792880e+07 -1.997277e+11 -1.330091e+07
## [4861,] -3.263534e+11 -2.992545e+11 -1.196667e+15 -3.164300e+09
## [4862,] -2.404486e+11 -2.186898e+11 -9.064818e+14 -2.400741e+09
## [4863,] -4.460398e+09 -3.775899e+09 -1.511628e+13 -8.026956e+07
## [4864,] -2.956983e+06 -2.442876e+06 -7.511873e+10 -5.569296e+06
## [4865,] -2.566226e+04 -1.934640e+04 -3.215349e+10 -6.468840e+06
## [4866,] -1.061783e+08 -1.003421e+08 -1.999431e+11 -1.279329e+07
## [4867,] -3.221070e+11 -2.891437e+11 -1.197312e+15 -2.807872e+09
## [4868,] -2.452447e+11 -2.420415e+11 -9.069702e+14 -2.368975e+09
## [4869,] -4.335564e+09 -4.308041e+09 -1.512442e+13 -9.193121e+07
## [4870,] -3.834718e+06 -2.681571e+06 -7.511873e+10 -5.583385e+06
```

```
## [4871,] -2.890173e+04 -1.682591e+03 -3.215349e+10 -6.339727e+06
## [4872,] -1.079116e+08 -1.076631e+08 -1.999431e+11 -1.292201e+07
## [4873,] -3.458012e+11 -3.414306e+11 -1.197312e+15 -3.185219e+09
## [4874,] -2.404478e+11 -2.186890e+11 -9.069702e+14 -2.472739e+09
## [4875,] -4.587211e+09 -3.775993e+09 -1.512442e+13 -9.093043e+07
## [4876,] -3.219038e+06 -1.793539e+06 -7.511873e+10 -5.555224e+06
## [4877,] -2.864252e+04 -5.886114e+01 -3.217081e+10 -6.437828e+06
## [4878,] -1.052098e+08 -9.329363e+07 -2.000508e+11 -1.246701e+07
## [4879,] -3.263508e+11 -2.891421e+11 -1.198602e+15 -2.998507e+09
## [4880,] -2.517126e+11 -1.893935e+11 -9.079476e+14 -2.198299e+09
## [4881,] -4.530881e+09 -3.648643e+09 -1.514072e+13 -8.200785e+07
## [4882,] -2.898096e+06 -1.992384e+06 -7.524016e+10 -5.761266e+06
## [4883,] -2.193118e+04 -3.877473e+01 -3.220547e+10 -6.548119e+06
## [4884,] -1.004034e+08 -9.104005e+07 -2.003741e+11 -1.300434e+07
## [4885,] -3.095339e+11 -3.095339e+11 -1.199893e+15 -3.290936e+09
## [4886,] -2.119115e+11 -2.582647e+11 -9.089255e+14 -2.570185e+09
## [4887,] -4.730607e+09 -3.906196e+09 -1.516518e+13 -7.960293e+07
## [4888,] -3.618429e+06 -1.988072e+06 -7.532117e+10 -5.704300e+06
## [4889,] -4.632781e+04 -8.810280e+03 -3.224015e+10 -6.450855e+06
## [4890,] -1.122604e+08 -8.878522e+07 -2.004819e+11 -1.270094e+07
## [4891,] -3.012923e+11 -2.992495e+11 -1.200539e+15 -2.719282e+09
## [4892,] -2.468503e+11 -2.111646e+11 -9.094146e+14 -2.496619e+09
## [4893,] -4.587832e+09 -4.038218e+09 -1.517334e+13 -7.775973e+07
## [4894,] -2.812158e+06 -1.779241e+06 -7.540223e+10 -5.811852e+06
## [4895,] -2.552048e+04 -2.149367e+03 -3.227484e+10 -6.456128e+06
## [4896,] -1.067826e+08 -9.338222e+07 -2.006977e+11 -1.259266e+07
## [4897,] -3.338428e+11 -2.792018e+11 -1.201831e+15 -2.738597e+09
## [4898,] -2.420362e+11 -1.965162e+11 -9.103932e+14 -2.321319e+09
## [4899,] -4.559725e+09 -3.776744e+09 -1.518967e+13 -8.020526e+07
## [4900,] -2.907887e+06 -2.907887e+06 -7.548333e+10 -5.644247e+06
## [4901,] -2.990794e+04 -2.293242e+03 -3.230955e+10 -6.483868e+06
## [4902,] -1.033794e+08 -9.111297e+07 -2.009135e+11 -1.249330e+07
## [4903,] -3.370790e+11 -2.992453e+11 -1.203770e+15 -2.997837e+09
## [4904,] -2.428328e+11 -2.186819e+11 -9.118622e+14 -2.289939e+09
## [4905,] -4.559931e+09 -3.400852e+09 -1.520600e+13 -8.751585e+07
## [4906,] -2.879913e+06 -3.436012e+06 -7.552390e+10 -5.651424e+06
## [4907,] -4.679606e+04 -2.456899e+03 -3.232692e+10 -6.355983e+06
## [4908,] -9.931446e+07 -9.114215e+07 -2.011295e+11 -1.305159e+07
## [4909,] -3.359968e+11 -2.694363e+11 -1.204417e+15 -2.462716e+09
## [4910,] -2.412358e+11 -2.263336e+11 -9.123521e+14 -1.861728e+09
## [4911,] -4.531807e+09 -3.777026e+09 -1.521417e+13 -8.597042e+07
## [4912,] -3.460873e+06 -1.975164e+06 -7.556447e+10 -5.708389e+06
## [4913,] -8.079113e+04 -2.441788e+03 -3.234429e+10 -6.476663e+06
## [4914,] -9.576908e+07 -9.812551e+07 -2.011295e+11 -1.367269e+07
## [4915,] -3.284761e+11 -2.694363e+11 -1.204417e+15 -3.018200e+09
## [4916,] -2.508924e+11 -2.582593e+11 -9.123521e+14 -2.167337e+09
## [4917,] -4.503770e+09 -4.038800e+09 -1.522234e+13 -8.774042e+07
## [4918,] -3.430349e+06 -2.414297e+06 -7.560506e+10 -5.906167e+06
## [4919,] -3.081859e+04 -2.517812e+03 -3.236166e+10 -6.578330e+06
## [4920,] -1.118669e+08 -8.664400e+07 -2.012376e+11 -1.278184e+07
## [4921,] -3.446943e+11 -3.414190e+11 -1.205711e+15 -3.518506e+09
## [4922,] -2.452348e+11 -2.341161e+11 -9.133324e+14 -2.197510e+09
## [4923,] -4.254555e+09 -4.173026e+09 -1.523051e+13 -9.804042e+07
## [4924,] -3.210160e+06 -2.411922e+06 -7.564566e+10 -5.712128e+06
## [4925,] -2.119747e+03 -9.994912e+03 -3.237904e+10 -6.434571e+06
## [4926,] -1.091158e+08 -9.117133e+07 -2.013456e+11 -1.316664e+07
## [4927,] -3.306118e+11 -2.598437e+11 -1.207653e+15 -3.507187e+09
## [4928,] -2.186776e+11 -2.341139e+11 -9.148037e+14 -2.602254e+09
```



```
## [4929,] -4.406377e+09 -3.649935e+09 -1.525505e+13 -9.256818e+07
## [4930,] -3.471571e+06 -2.402438e+06 -7.580816e+10 -5.577811e+06
## [4931,] -1.505040e+04 -1.061525e+04 -3.244859e+10 -6.475029e+06
## [4932,] -1.039913e+08 -1.006025e+08 -2.017782e+11 -1.278349e+07
## [4933,] -3.601820e+11 -3.199800e+11 -1.208301e+15 -2.876044e+09
## [4934,] -2.767111e+11 -2.111562e+11 -9.152944e+14 -2.159365e+09
## [4935,] -4.876958e+09 -4.039286e+09 -1.526323e+13 -8.508728e+07
## [4936,] -2.861787e+06 -2.402438e+06 -7.580816e+10 -5.683994e+06
## [4937,] -9.553469e+04 -2.896508e+01 -3.244859e+10 -6.395383e+06
## [4938,] -1.022899e+08 -9.821636e+07 -2.017782e+11 -1.295521e+07
## [4939,] -3.316826e+11 -2.992386e+11 -1.208949e+15 -3.152193e+09
## [4940,] -2.468397e+11 -1.965081e+11 -9.162762e+14 -2.447160e+09
## [4941,] -4.255153e+09 -4.309947e+09 -1.527961e+13 -9.423088e+07
## [4942,] -3.167151e+06 -1.562831e+06 -7.588948e+10 -6.023366e+06
## [4943,] -4.183728e+04 -2.359550e+04 -3.248340e+10 -6.588156e+06
## [4944,] -1.050011e+08 -9.355952e+07 -2.019946e+11 -1.268338e+07
## [4945,] -3.252720e+11 -2.791921e+11 -1.209597e+15 -3.697079e+09
## [4946,] -2.356843e+11 -2.500743e+11 -9.162762e+14 -2.952379e+09
## [4947,] -4.646179e+09 -3.777871e+09 -1.528780e+13 -9.202360e+07
## [4948,] -3.325637e+06 -2.170046e+06 -7.593016e+10 -5.648750e+06
## [4949,] -7.692900e+04 -8.273762e+03 -3.250081e+10 -6.387130e+06
## [4950,] -1.112377e+08 -8.900136e+07 -2.021029e+11 -1.304076e+07
## [4951,] -3.199774e+11 -3.306082e+11 -1.210246e+15 -2.986805e+09
## [4952,] -2.404328e+11 -2.263271e+11 -9.167673e+14 -2.495473e+09
## [4953,] -4.575111e+09 -3.650304e+09 -1.528780e+13 -9.222451e+07
## [4954,] -4.040432e+06 -1.752839e+06 -7.593016e+10 -5.702052e+06
## [4955,] -2.244560e+04 -1.758546e+03 -3.250081e+10 -6.436819e+06
## [4956,] -1.074995e+08 -9.827696e+07 -2.022112e+11 -1.282249e+07
## [4957,] -3.501806e+11 -2.992361e+11 -1.210894e+15 -2.865729e+09
## [4958,] -2.516980e+11 -2.341102e+11 -9.172586e+14 -2.174184e+09
## [4959,] -4.761133e+09 -4.173816e+09 -1.529599e+13 -8.437281e+07
## [4960,] -3.188292e+06 -2.629273e+06 -7.597084e+10 -5.730669e+06
## [4961,] -7.381603e+04 -8.202948e+04 -3.251823e+10 -6.543193e+06
## [4962,] -1.104978e+08 -9.827696e+07 -2.022112e+11 -1.276257e+07
## [4963,] -3.306074e+11 -3.199765e+11 -1.210894e+15 -2.885721e+09
## [4964,] -2.590766e+11 -2.263263e+11 -9.172586e+14 -2.181755e+09
## [4965,] -4.833626e+09 -4.039675e+09 -1.529599e+13 -8.514367e+07
## [4966,] -3.600312e+06 -2.629273e+06 -7.597084e+10 -5.762851e+06
## [4967,] -5.177488e+04 -6.820366e+01 -3.251823e+10 -6.515615e+06
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## [4969,] -2.982173e+11 -3.199765e+11 -1.210894e+15 -3.089459e+09
## [4970,] -2.508848e+11 -2.341102e+11 -9.172586e+14 -2.685275e+09
## [4971,] -5.448730e+09 -4.173816e+09 -1.529599e+13 -1.055545e+08
## [4972,] -4.756116e+06 -1.750816e+06 -7.597084e+10 -5.375702e+06
## [4973,] -4.707416e+04 -2.430494e+04 -3.253565e+10 -6.625160e+06
## [4974,] -1.006792e+08 -1.130441e+08 -2.023195e+11 -1.345256e+07
## [4975,] -3.053844e+11 -2.992352e+11 -1.211543e+15 -3.685476e+09
## [4976,] -2.574262e+11 -2.037629e+11 -9.182414e+14 -1.989043e+09
## [4977,] -4.533042e+09 -3.650581e+09 -1.531238e+13 -8.173003e+07
## [4978,] -3.399283e+06 -2.163298e+06 -7.605225e+10 -5.766608e+06
## [4979,] -3.279701e+04 -1.174582e+04 -3.257050e+10 -6.577553e+06
## [4980,] -1.102945e+08 -9.596361e+07 -2.025362e+11 -1.308881e+07
## [4981,] -3.189204e+11 -2.992336e+11 -1.212841e+15 -2.517533e+09
## [4982,] -2.557810e+11 -2.111505e+11 -9.192248e+14 -2.257901e+09
## [4983,] -4.632442e+09 -3.908107e+09 -1.532878e+13 -9.290221e+07
## [4984,] -2.838566e+06 -1.943077e+06 -7.617444e+10 -5.900167e+06
## [4985,] -2.558399e+04 -3.704780e+03 -3.260537e+10 -6.462599e+06
## [4986,] -1.090733e+08 -9.136114e+07 -2.027531e+11 -1.337853e+07
```

```
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## [4988,] -2.500682e+11 -2.037601e+11 -9.202087e+14 -1.945598e+09
## [4989,] -5.040172e+09 -4.310750e+09 -1.534518e+13 -8.717176e+07
## [4990,] -3.198561e+06 -1.940948e+06 -7.621519e+10 -5.911130e+06
## [4991,] -2.231301e+04 -7.329584e+03 -3.262281e+10 -6.424139e+06
## [4992,] -1.031725e+08 -9.836788e+07 -2.028615e+11 -1.294130e+07
## [4993,] -3.501752e+11 -2.891215e+11 -1.214789e+15 -2.945615e+09
## [4994,] -2.525080e+11 -2.186698e+11 -9.202087e+14 -2.304245e+09
## [4995,] -4.819720e+09 -3.908298e+09 -1.534518e+13 -8.484225e+07
## [4996,] -3.090058e+06 -1.508817e+06 -7.625595e+10 -5.929366e+06
## [4997,] -3.715617e+04 -1.241754e+04 -3.264026e+10 -6.742720e+06
## [4998,] -1.103587e+08 -1.081076e+08 -2.029700e+11 -1.282652e+07
## [4999,] -3.435865e+11 -2.992294e+11 -1.216088e+15 -3.224920e+09
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## [5001,] -4.147600e+09 -3.778717e+09 -1.536160e+13 -8.936376e+07
## [5002,] -3.493018e+06 -2.374096e+06 -7.629672e+10 -5.607071e+06
## [5003,] -2.617891e+04 -6.942453e+03 -3.267517e+10 -6.548260e+06
## [5004,] -1.081393e+08 -9.141958e+07 -2.031871e+11 -1.293197e+07
## [5005,] -2.811565e+11 -2.992286e+11 -1.216738e+15 -3.505920e+09
## [5006,] -2.741464e+11 -2.037580e+11 -9.216856e+14 -2.188696e+09
## [5007,] -5.235549e+09 -3.778811e+09 -1.536981e+13 -8.957621e+07
## [5008,] -3.055873e+06 -2.369389e+06 -7.637830e+10 -5.785237e+06
## [5009,] -2.753616e+04 -2.649635e+04 -3.269263e+10 -6.615109e+06
## [5010,] -9.890397e+07 -1.056806e+08 -2.032957e+11 -1.311887e+07
## [5011,] -3.446773e+11 -2.694196e+11 -1.218039e+15 -3.203525e+09
## [5012,] -2.516896e+11 -1.964993e+11 -9.226708e+14 -2.642541e+09
## [5013,] -4.283806e+09 -4.449792e+09 -1.538624e+13 -9.749961e+07
## [5014,] -3.053202e+06 -1.728642e+06 -7.641911e+10 -5.596740e+06
## [5015,] -2.111517e+05 -2.724545e+02 -3.271010e+10 -6.324528e+06
## [5016,] -1.071936e+08 -9.609840e+07 -2.035129e+11 -1.293985e+07
## [5017,] -3.136712e+11 -3.095092e+11 -1.218690e+15 -3.047143e+09
## [5018,] -2.412192e+11 -2.037560e+11 -9.231636e+14 -1.930909e+09
## [5019,] -4.733551e+09 -4.040840e+09 -1.539446e+13 -8.667177e+07
## [5020,] -2.896223e+06 -2.140878e+06 -7.645992e+10 -5.558078e+06
## [5021,] -5.841364e+01 -1.691970e+04 -3.272757e+10 -6.449893e+06
## [5022,] -1.089351e+08 -8.694300e+07 -2.035129e+11 -1.300882e+07
## [5023,] -3.273894e+11 -2.598305e+11 -1.218690e+15 -2.668688e+09
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## [5025,] -4.647534e+09 -3.908871e+09 -1.539446e+13 -8.784499e+07
## [5026,] -2.138642e+06 -3.100167e+06 -7.650075e+10 -5.721103e+06
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## [5028,] -1.045165e+08 -8.921776e+07 -2.037303e+11 -1.264265e+07
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## [5032,] -3.068603e+06 -1.720614e+06 -7.658244e+10 -5.653691e+06
## [5033,] -1.509918e+04 -4.692751e+03 -3.278001e+10 -6.726070e+06
## [5034,] -1.166072e+08 -9.381099e+07 -2.038390e+11 -1.313789e+07
## [5035,] -3.381390e+11 -3.305942e+11 -1.220642e+15 -3.256144e+09
## [5036,] -2.428132e+11 -2.420144e+11 -9.246429e+14 -2.478073e+09
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## [5042,] -2.500547e+11 -1.986541e+11 -2.159993e+13 -1.265805e+09
## [5043,] -4.350397e+09 -3.244035e+09 -3.601954e+11 -2.903551e+07
## [5044,] -1.777411e+07 -1.397731e+07 -1.788989e+09 -7.501134e+03
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## [5057,] -6.323506e+06 -5.329708e+06 -7.684259e+08 -4.962779e+04
## [5058,] -6.062164e+07 -5.269988e+07 -4.778375e+09 -9.199818e+05
## [5059,] -3.269637e+11 -2.719409e+11 -2.861418e+13 -1.600803e+09
## [5060,] -2.590574e+11 -2.209382e+11 -2.167539e+13 -1.277320e+09
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## [5100,] -1.051318e+08 -9.391464e+07 -2.046010e+11 -1.284863e+07
## [5101,] -3.043375e+11 -3.305880e+11 -1.225205e+15 -3.244907e+09
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## [5105,] -2.410049e+04 -1.548084e+04 -3.293759e+10 -6.777106e+06
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## [5116,] -3.091455e+06 -1.698634e+06 -7.703250e+10 -5.923800e+06
## [5117,] -1.675088e+03 -5.914402e+03 -3.297265e+10 -6.464370e+06
## [5118,] -1.032399e+08 -9.397389e+07 -2.050370e+11 -1.275063e+07
## [5119,] -3.147031e+11 -3.199532e+11 -1.228469e+15 -3.297776e+09
## [5120,] -2.508633e+11 -1.964878e+11 -9.310666e+14 -1.894365e+09
## [5121,] -4.692119e+09 -3.780596e+09 -1.552625e+13 -8.650973e+07
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## [5123,] -4.422088e+04 -9.114829e+02 -3.302529e+10 -6.616611e+06
## [5124,] -1.082083e+08 -9.171206e+07 -2.053643e+11 -1.303348e+07
## [5125,] -3.457563e+11 -2.992118e+11 -1.229776e+15 -3.014926e+09
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## [5130,] -1.127360e+08 -9.401834e+07 -2.053643e+11 -1.293000e+07
## [5131,] -3.590339e+11 -2.504029e+11 -1.229776e+15 -3.149447e+09
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## [5178,] -9.698917e+07 -1.037010e+08 -2.065667e+11 -1.394776e+07
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## [5192,] -2.340799e+11 -2.262965e+11 -9.375125e+14 -2.565693e+09
## [5193,] -4.693584e+09 -4.736706e+09 -1.564202e+13 -8.496343e+07
## [5194,] -3.424124e+06 -2.768860e+06 -7.768949e+10 -5.925228e+06
## [5195,] -1.587882e+04 -8.080349e+03 -3.327149e+10 -6.573290e+06
## [5196,] -1.071885e+08 -9.422591e+07 -2.068952e+11 -1.274085e+07
## [5197,] -3.231102e+11 -2.791558e+11 -1.238943e+15 -3.221884e+09
## [5198,] -2.557493e+11 -2.340770e+11 -9.395003e+14 -1.900300e+09
## [5199,] -4.694003e+09 -4.044144e+09 -1.567518e+13 -8.618182e+07
## [5200,] -3.249491e+06 -1.856715e+06 -7.785418e+10 -5.929217e+06
## [5201,] -1.411681e+04 -1.862435e+03 -3.332436e+10 -6.708998e+06
## [5202,] -1.062469e+08 -9.427042e+07 -2.072240e+11 -1.277433e+07
## [5203,] -3.424608e+11 -2.890886e+11 -1.240912e+15 -3.211052e+09
## [5204,] -2.209229e+11 -2.186412e+11 -9.399976e+14 -2.623147e+09
## [5205,] -4.853087e+09 -4.178359e+09 -1.567518e+13 -9.070931e+07
## [5206,] -2.588002e+06 -2.065525e+06 -7.785418e+10 -5.741855e+06
## [5207,] -3.701491e+04 -4.057316e+01 -3.332436e+10 -6.635501e+06
## [5208,] -1.130120e+08 -8.300987e+07 -2.072240e+11 -1.331017e+07
## [5209,] -3.359472e+11 -2.693918e+11 -1.240912e+15 -3.200498e+09
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## [5211,] -4.287308e+09 -4.453361e+09 -1.567518e+13 -8.813605e+07
## [5212,] -2.733979e+06 -1.659031e+06 -7.785418e+10 -6.020366e+06
## [5213,] -8.890771e+03 -1.862435e+03 -3.332436e+10 -6.617821e+06
## [5214,] -1.052625e+08 -9.897512e+07 -2.072240e+11 -1.336261e+07
## [5215,] -3.381114e+11 -2.890886e+11 -1.240912e+15 -2.972709e+09
## [5216,] -2.818146e+11 -2.186412e+11 -9.399976e+14 -2.340389e+09
## [5217,] -4.651077e+09 -4.314764e+09 -1.567518e+13 -1.124063e+08
## [5218,] -2.856102e+06 -1.657063e+06 -7.789537e+10 -5.958399e+06
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## [5220,] -1.107499e+08 -9.662347e+07 -2.073337e+11 -1.308965e+07
## [5221,] -3.273579e+11 -2.791518e+11 -1.242226e+15 -3.715122e+09
## [5222,] -2.524757e+11 -2.340747e+11 -9.409926e+14 -2.395502e+09
## [5223,] -4.708565e+09 -4.044338e+09 -1.569177e+13 -9.193876e+07
## [5224,] -2.901532e+06 -1.291818e+06 -7.797780e+10 -5.763584e+06
## [5225,] -1.036488e+04 -2.059879e+04 -3.337728e+10 -6.787176e+06
## [5226,] -1.053252e+08 -9.201967e+07 -2.076628e+11 -1.276196e+07
## [5227,] -3.337854e+11 -2.598001e+11 -1.244197e+15 -2.589176e+09
## [5228,] -2.309434e+11 -2.419874e+11 -9.424860e+14 -2.308734e+09
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## [5230,] -3.423446e+06 -1.647241e+06 -7.810153e+10 -5.846507e+06
## [5231,] -1.791584e+04 -3.797363e+04 -3.343024e+10 -6.781229e+06
## [5232,] -1.026717e+08 -9.435948e+07 -2.078824e+11 -1.351907e+07
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## [5234,] -2.598617e+11 -2.186362e+11 -9.434823e+14 -2.132783e+09
## [5235,] -4.651806e+09 -4.179050e+09 -1.573329e+13 -8.608683e+07
## [5236,] -3.019329e+06 -2.269314e+06 -7.814279e+10 -5.717477e+06
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## [5239,] -3.668725e+11 -2.890829e+11 -1.245513e+15 -3.147389e+09
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## [5317,] -3.230859e+11 -2.693720e+11 -1.257381e+15 -3.052457e+09
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## [5382,] -6.306827e+07 -5.445159e+07 -4.778375e+09 -9.384376e+05
## [5383,] -3.420557e+11 -3.018837e+11 -2.861418e+13 -1.699223e+09
## [5384,] -2.648698e+11 -2.059501e+11 -2.167539e+13 -1.288943e+09
## [5385,] -3.998923e+09 -4.268051e+09 -3.614537e+11 -2.704863e+07
## [5386,] -1.635101e+07 -1.397160e+07 -1.795238e+09 -9.860944e+03
## [5387,] -5.982806e+06 -6.274257e+06 -7.684259e+08 -4.984660e+04
## [5388,] -5.822341e+07 -6.174484e+07 -4.778375e+09 -9.245786e+05
## [5389,] -3.420557e+11 -2.719409e+11 -2.861418e+13 -1.585922e+09
## [5390,] -2.325248e+11 -2.607115e+11 -2.167539e+13 -1.197435e+09
## [5391,] -4.132391e+09 -3.611663e+09 -3.614537e+11 -2.481071e+07
## [5392,] -1.808343e+07 -1.569427e+07 -1.795238e+09 -1.426462e+04
```



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## [5393,] -6.497394e+06 -5.792356e+06 -7.684259e+08 -5.139170e+04
## [5394,] -6.231030e+07 -5.445159e+07 -4.778375e+09 -9.131081e+05
## [5395,] -3.237739e+11 -2.623074e+11 -2.861418e+13 -1.608270e+09
## [5396,] -2.380331e+11 -2.364527e+11 -2.167539e+13 -1.214336e+09
## [5397,] -4.281737e+09 -3.611663e+09 -3.614537e+11 -2.470655e+07
## [5398,] -1.776767e+07 -1.510892e+07 -1.795238e+09 -1.373527e+04
## [5399,] -6.623044e+06 -6.030900e+06 -7.684259e+08 -5.161436e+04
## [5400,] -6.421381e+07 -5.269988e+07 -4.778375e+09 -9.085399e+05
## [5401,] -3.402487e+11 -2.693617e+11 -1.265987e+15 -3.218328e+09
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## [5404,] -3.198779e+06 -1.231738e+06 -7.942737e+10 -5.958070e+06
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## [5406,] -1.061055e+08 -1.019560e+08 -2.114114e+11 -1.356693e+07
## [5407,] -3.490017e+11 -3.199031e+11 -1.266651e+15 -3.082243e+09
## [5408,] -2.732369e+11 -1.964492e+11 -9.594944e+14 -2.361097e+09
## [5409,] -4.291212e+09 -3.785954e+09 -1.600030e+13 -9.450576e+07
## [5410,] -3.412935e+06 -1.776388e+06 -7.946898e+10 -5.987323e+06
## [5411,] -2.310978e+04 -6.512003e+04 -3.403337e+10 -6.852853e+06
## [5412,] -1.088665e+08 -8.800070e+07 -2.116329e+11 -1.332365e+07
## [5413,] -3.273247e+11 -2.890558e+11 -1.267314e+15 -4.399449e+09
## [5414,] -2.491966e+11 -1.964485e+11 -9.599970e+14 -2.005056e+09
## [5415,] -4.584212e+09 -3.658434e+09 -1.601707e+13 -8.598631e+07
## [5416,] -2.978361e+06 -1.995319e+06 -7.959388e+10 -5.965713e+06
## [5417,] -1.979101e+04 -1.544284e+04 -3.406902e+10 -6.927839e+06
## [5418,] -1.086488e+08 -1.044493e+08 -2.118546e+11 -1.374872e+07
## [5419,] -3.413333e+11 -2.791195e+11 -1.268641e+15 -3.292424e+09
## [5420,] -2.656555e+11 -2.037035e+11 -9.610025e+14 -2.432352e+09
## [5421,] -4.669749e+09 -3.786236e+09 -1.602545e+13 -8.873968e+07
## [5422,] -2.509345e+06 -1.770283e+06 -7.959388e+10 -5.896693e+06
## [5423,] -3.209784e+04 -1.447122e+04 -3.408685e+10 -6.826354e+06
## [5424,] -1.084154e+08 -9.962998e+07 -2.119655e+11 -1.354219e+07
## [5425,] -3.446073e+11 -2.991617e+11 -1.269305e+15 -2.989475e+09
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## [5428,] -2.820776e+06 -1.766218e+06 -7.967720e+10 -5.867929e+06
## [5429,] -1.625498e+03 -8.130828e+02 -3.412252e+10 -6.821524e+06
## [5430,] -1.086966e+08 -8.807240e+07 -2.121873e+11 -1.381016e+07
## [5431,] -3.115185e+11 -2.791162e+11 -1.271298e+15 -3.123178e+09
## [5432,] -2.581793e+11 -2.340415e+11 -9.635185e+14 -2.305650e+09
## [5433,] -4.627454e+09 -3.658989e+09 -1.606741e+13 -8.280156e+07
## [5434,] -2.939559e+06 -1.386599e+06 -7.980227e+10 -6.153417e+06
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## [5436,] -1.045274e+08 -9.265114e+07 -2.124092e+11 -1.319702e+07
## [5437,] -3.104773e+11 -3.094395e+11 -1.272628e+15 -3.410590e+09
## [5438,] -2.285790e+11 -2.340407e+11 -9.640221e+14 -2.305577e+09
## [5439,] -4.570774e+09 -3.916710e+09 -1.607581e+13 -8.666918e+07
## [5440,] -2.287307e+06 -1.758103e+06 -7.984398e+10 -6.002739e+06
## [5441,] -2.401043e+04 -6.491770e+03 -3.419392e+10 -6.966380e+06
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## [5443,] -3.326697e+11 -3.198936e+11 -1.273958e+15 -3.564511e+09
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## [5445,] -4.656290e+09 -3.659266e+09 -1.609261e+13 -7.777892e+07
## [5446,] -3.246186e+06 -2.171397e+06 -7.992743e+10 -6.094630e+06
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## [5448,] -1.043297e+08 -1.021412e+08 -2.127424e+11 -1.408898e+07
## [5449,] -3.273159e+11 -2.890476e+11 -1.273958e+15 -2.988890e+09
## [5450,] -2.548902e+11 -2.036980e+11 -9.650297e+14 -2.399854e+09
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## [5453,] -2.994495e+04 -7.745550e+04 -3.422965e+10 -6.964089e+06
## [5454,] -1.038570e+08 -9.270999e+07 -2.128535e+11 -1.320184e+07
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## [5457,] -4.599536e+09 -4.049199e+09 -1.610942e+13 -9.327844e+07
## [5458,] -2.676868e+06 -1.049722e+06 -8.001093e+10 -6.321508e+06
## [5459,] -1.936936e+03 -1.197995e+03 -3.426540e+10 -6.979932e+06
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## [5463,] -5.631372e+09 -3.787271e+09 -1.611783e+13 -8.791402e+07
## [5464,] -2.842687e+06 -2.525154e+06 -8.013626e+10 -5.876136e+06
## [5465,] -1.234953e+04 -3.855007e+03 -3.430117e+10 -6.856358e+06
## [5466,] -1.152044e+08 -9.278358e+07 -2.134095e+11 -1.350084e+07
## [5467,] -3.511912e+11 -2.693466e+11 -1.278619e+15 -2.867281e+09
## [5468,] -2.427469e+11 -2.110810e+11 -9.685605e+14 -2.040369e+09
## [5469,] -4.642745e+09 -3.659914e+09 -1.615149e+13 -8.447280e+07
## [5470,] -4.202254e+06 -1.942225e+06 -8.021986e+10 -6.191386e+06
## [5471,] -7.106037e+04 -1.842252e+04 -3.433696e+10 -6.872078e+06
## [5472,] -1.003225e+08 -9.746657e+07 -2.135207e+11 -1.376274e+07
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## [5474,] -2.565247e+11 -2.664797e+11 -9.690654e+14 -2.367574e+09
## [5475,] -4.459278e+09 -3.787741e+09 -1.615991e+13 -8.030691e+07
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## [5478,] -1.046994e+08 -1.022648e+08 -2.136321e+11 -1.394659e+07
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## [5488,] -3.005536e+06 -1.541127e+06 -8.038720e+10 -6.128815e+06
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## [5490,] -1.062211e+08 -9.752693e+07 -2.139662e+11 -1.337970e+07
## [5491,] -3.073574e+11 -3.198832e+11 -1.281953e+15 -3.132235e+09
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## [5499,] -3.970828e+09 -4.321192e+09 -1.621047e+13 -1.002529e+08
## [5500,] -2.550767e+06 -1.725830e+06 -8.051283e+10 -6.095898e+06
## [5501,] -1.086862e+04 -5.720988e+04 -3.446236e+10 -6.902729e+06
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## [5505,] -4.830973e+09 -4.050561e+09 -1.622734e+13 -9.449991e+07
## [5506,] -3.202279e+06 -1.531655e+06 -8.059663e+10 -6.221937e+06
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## [5513,] -1.343536e+04 -2.077461e+04 -3.453412e+10 -6.965331e+06
## [5514,] -1.118301e+08 -9.763260e+07 -2.147468e+11 -1.341886e+07
## [5515,] -3.478752e+11 -2.890328e+11 -1.285961e+15 -2.886375e+09
## [5516,] -2.491744e+11 -1.964289e+11 -9.746282e+14 -2.543577e+09
## [5517,] -4.587110e+09 -3.918719e+09 -1.625267e+13 -7.970833e+07
## [5518,] -3.298825e+06 -1.914636e+06 -8.076436e+10 -6.118559e+06
## [5519,] -2.833815e+04 -2.563988e+03 -3.457002e+10 -6.934590e+06
## [5520,] -1.029354e+08 -1.048871e+08 -2.149700e+11 -1.378318e+07
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## [5522,] -2.524235e+11 -1.964282e+11 -9.751347e+14 -1.656415e+09
## [5523,] -4.730085e+09 -4.601402e+09 -1.626112e+13 -8.620331e+07
## [5524,] -2.799052e+06 -1.341974e+06 -8.084830e+10 -6.070869e+06
## [5525,] -3.295218e+04 -9.631674e+03 -3.460595e+10 -6.937472e+06
## [5526,] -1.093774e+08 -9.534182e+07 -2.151934e+11 -1.367036e+07
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## [5529,] -4.158532e+09 -3.919101e+09 -1.628647e+13 -9.644522e+07
## [5530,] -3.103828e+06 -2.119910e+06 -8.089028e+10 -6.174301e+06
## [5531,] -4.206867e+02 -5.632135e+00 -3.462392e+10 -6.946669e+06
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## [5537,] -7.838117e+02 -2.211714e+04 -3.464189e+10 -6.948111e+06
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## [5539,] -2.910347e+11 -2.991349e+11 -1.290643e+15 -3.172983e+09
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## [5541,] -4.630469e+09 -3.789434e+09 -1.631184e+13 -7.980387e+07
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## [5543,] -1.430626e+04 -6.168028e+04 -3.467786e+10 -6.974296e+06
## [5544,] -1.142501e+08 -9.775345e+07 -2.156406e+11 -1.355164e+07
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## [5550,] -1.114535e+08 -9.307823e+07 -2.156406e+11 -1.378168e+07
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## [5555,] -1.412408e+04 -1.039601e+04 -3.469585e+10 -6.942094e+06
## [5556,] -1.112332e+08 -9.081271e+07 -2.158644e+11 -1.376638e+07
## [5557,] -3.114912e+11 -3.304984e+11 -1.292653e+15 -3.353723e+09
## [5558,] -2.088362e+11 -2.340185e+11 -9.791914e+14 -2.575713e+09
## [5559,] -4.573874e+09 -3.789622e+09 -1.632876e+13 -8.114576e+07
## [5560,] -2.960663e+06 -1.164827e+06 -8.110036e+10 -6.108220e+06
## [5561,] -6.216574e+03 -1.055238e+04 -3.471384e+10 -6.948707e+06
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```

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## [5570,] -2.507876e+11 -2.262340e+11 -9.807148e+14 -2.445433e+09
## [5571,] -5.023592e+09 -4.322900e+09 -1.635417e+13 -9.370697e+07
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## [5573,] -1.675044e+02 -3.133765e+03 -3.476785e+10 -6.847365e+06
## [5574,] -1.080237e+08 -9.085641e+07 -2.162002e+11 -1.343027e+07
## [5575,] -2.991291e+11 -2.991291e+11 -1.295335e+15 -3.151418e+09
## [5576,] -3.154215e+11 -1.964201e+11 -9.812229e+14 -2.469484e+09
## [5577,] -5.128094e+09 -3.789999e+09 -1.636264e+13 -9.906474e+07
## [5578,] -3.024855e+06 -1.322570e+06 -8.131071e+10 -6.204901e+06
## [5579,] -2.829701e+04 -2.420974e+04 -3.480388e+10 -7.041576e+06
## [5580,] -1.073104e+08 -9.318147e+07 -2.164242e+11 -1.363521e+07
## [5581,] -3.198642e+11 -3.198642e+11 -1.296677e+15 -3.119933e+09
## [5582,] -2.515984e+11 -1.964187e+11 -9.822395e+14 -1.994794e+09
## [5583,] -4.447960e+09 -3.920154e+09 -1.637959e+13 -9.847101e+07
## [5584,] -2.694500e+06 -1.497799e+06 -8.135281e+10 -6.331964e+06
## [5585,] -1.228806e+03 -1.904999e+04 -3.482190e+10 -6.897967e+06
## [5586,] -1.164377e+08 -8.863264e+07 -2.165363e+11 -1.364969e+07
## [5587,] -3.052755e+11 -3.198642e+11 -1.296677e+15 -3.214341e+09
## [5588,] -2.363745e+11 -2.110621e+11 -9.822395e+14 -2.836790e+09
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## [5590,] -3.233202e+06 -2.095504e+06 -8.135281e+10 -5.803013e+06
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## [5593,] -3.347907e+11 -2.693228e+11 -1.298691e+15 -2.945197e+09
## [5594,] -2.524097e+11 -2.419250e+11 -9.842741e+14 -2.179768e+09
## [5595,] -4.965282e+09 -4.187156e+09 -1.642201e+13 -9.060921e+07
## [5596,] -3.661933e+06 -2.537409e+06 -8.156348e+10 -6.209165e+06
## [5597,] -8.110591e+03 -2.565737e+04 -3.491208e+10 -6.964581e+06
## [5598,] -1.096493e+08 -9.794998e+07 -2.170971e+11 -1.388227e+07
## [5599,] -3.369495e+11 -2.790815e+11 -1.300035e+15 -3.078002e+09
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## [5602,] -2.825398e+06 -3.571025e+06 -8.164783e+10 -6.175942e+06
## [5603,] -7.837743e+03 -2.614925e+04 -3.494818e+10 -7.011566e+06
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## [5605,] -3.489547e+11 -2.503203e+11 -1.301379e+15 -3.046887e+09
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## [5611,] -3.032124e+11 -2.890130e+11 -1.302052e+15 -3.119250e+09
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## [5613,] -4.718113e+09 -3.791034e+09 -1.645598e+13 -8.907985e+07
## [5614,] -2.921350e+06 -1.140217e+06 -8.173222e+10 -6.179831e+06
## [5615,] -4.440628e+02 -4.243656e+03 -3.498430e+10 -7.050891e+06
## [5616,] -1.077329e+08 -9.334382e+07 -2.176585e+11 -1.330166e+07
## [5617,] -3.125187e+11 -2.790775e+11 -1.303397e+15 -3.571629e+09
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## [5620,] -2.007339e+06 -3.018904e+06 -8.181666e+10 -6.135597e+06
## [5621,] -5.642307e+04 -9.961962e+02 -3.502044e+10 -7.108626e+06
## [5622,] -1.043144e+08 -1.028530e+08 -2.178833e+11 -1.389538e+07
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## [5624,] -2.774476e+11 -2.262231e+11 -9.883498e+14 -2.317650e+09
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## [5626,] -2.447465e+06 -1.857965e+06 -8.190113e+10 -6.143171e+06
## [5627,] -2.360993e+03 -4.650990e+03 -3.505660e+10 -7.017662e+06
## [5628,] -1.038417e+08 -1.004554e+08 -2.179958e+11 -1.330966e+07
## [5629,] -3.219639e+11 -3.198521e+11 -1.306090e+15 -2.944285e+09
## [5630,] -2.467289e+11 -2.581397e+11 -9.893700e+14 -2.163935e+09
## [5631,] -4.747441e+09 -4.463361e+09 -1.649850e+13 -8.640638e+07
## [5632,] -2.959401e+06 -1.855883e+06 -8.194339e+10 -6.280812e+06
## [5633,] -2.940268e+04 -7.031277e+04 -3.507469e+10 -7.058157e+06
## [5634,] -1.041013e+08 -9.573020e+07 -2.181083e+11 -1.390678e+07
## [5635,] -3.093970e+11 -3.093970e+11 -1.306090e+15 -3.202571e+09
## [5636,] -2.347885e+11 -2.185704e+11 -9.898803e+14 -2.317430e+09
## [5637,] -4.761980e+09 -4.324708e+09 -1.650701e+13 -9.235709e+07
## [5638,] -2.804885e+06 -1.469875e+06 -8.198566e+10 -6.416201e+06
## [5639,] -8.130828e+02 -4.307168e+02 -3.509278e+10 -7.083092e+06
## [5640,] -1.033856e+08 -1.004861e+08 -2.182208e+11 -1.379667e+07
## [5641,] -3.251439e+11 -2.597269e+11 -1.306764e+15 -2.658198e+09
## [5642,] -2.499612e+11 -2.419160e+11 -9.903908e+14 -2.178912e+09
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## [5651,] -5.162260e+03 -9.969805e+04 -3.511088e+10 -7.134254e+06
## [5652,] -1.058491e+08 -9.113340e+07 -2.183333e+11 -1.344021e+07
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## [5663,] -9.140285e+03 -2.867874e+04 -3.512898e+10 -7.075561e+06
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## [5676,] -1.068995e+08 -8.892064e+07 -2.187837e+11 -1.357703e+07
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## [5693,] -1.686752e+02 -3.051886e+04 -3.525581e+10 -7.031012e+06
## [5694,] -1.079551e+08 -8.897829e+07 -2.192346e+11 -1.392808e+07
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## [5700,] -1.064840e+08 -1.006393e+08 -2.193473e+11 -1.423015e+07
## [5701,] -3.486280e+11 -2.719409e+11 -2.861418e+13 -1.563731e+09
## [5702,] -2.598838e+11 -2.209382e+11 -2.167539e+13 -1.180653e+09
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## [5706,] -6.024953e+07 -5.269988e+07 -4.778375e+09 -9.153965e+05
## [5707,] -2.847241e+11 -3.018837e+11 -2.861418e+13 -1.800579e+09
## [5708,] -2.286289e+11 -2.209375e+11 -2.175098e+13 -1.077063e+09
## [5709,] -3.919989e+09 -3.611755e+09 -3.627142e+11 -2.237863e+07
## [5710,] -1.738606e+07 -1.510298e+07 -1.801499e+09 -1.886484e+04
## [5711,] -6.518525e+06 -5.788678e+06 -7.711057e+08 -5.865024e+04
## [5712,] -5.878427e+07 -5.624341e+07 -4.795039e+09 -8.626850e+05
## [5713,] -3.464294e+11 -2.817473e+11 -2.871397e+13 -1.350363e+09
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## [5722,] -1.744831e+07 -1.568822e+07 -1.801499e+09 -2.011392e+04
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## [5729,] -6.196939e+06 -5.788678e+06 -7.711057e+08 -5.606572e+04
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## [5748,] -1.115613e+08 -1.007160e+08 -2.199117e+11 -1.381071e+07
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## [5757,] -4.326417e+09 -4.326417e+09 -1.665201e+13 -1.048733e+08
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## [5763,] -4.821846e+09 -3.793292e+09 -1.666056e+13 -9.322701e+07
## [5764,] -2.884272e+06 -2.023134e+06 -8.274831e+10 -6.230326e+06
## [5765,] -3.117912e+04 -3.296882e+04 -3.541922e+10 -7.117177e+06
## [5766,] -1.068733e+08 -1.031942e+08 -2.203638e+11 -1.354125e+07
## [5767,] -3.456350e+11 -2.692982e+11 -1.319597e+15 -2.862292e+09
## [5768,] -2.532024e+11 -1.963957e+11 -9.996013e+14 -2.215646e+09
## [5769,] -4.720738e+09 -4.190024e+09 -1.666912e+13 -8.884790e+07
## [5770,] -2.260941e+06 -2.238569e+06 -8.279078e+10 -6.159879e+06
## [5771,] -7.660222e+03 -3.324688e+04 -3.543740e+10 -7.027309e+06
## [5772,] -1.051484e+08 -9.369853e+07 -2.203638e+11 -1.392259e+07
## [5773,] -3.251273e+11 -2.692982e+11 -1.319597e+15 -3.034333e+09
## [5774,] -2.639261e+11 -2.262071e+11 -9.996013e+14 -2.402711e+09
## [5775,] -4.620702e+09 -4.190123e+09 -1.667767e+13 -9.345878e+07
## [5776,] -1.617173e+06 -3.774859e+06 -8.283327e+10 -6.053079e+06
## [5777,] -9.178303e+03 -5.425183e+04 -3.547378e+10 -7.276876e+06
## [5778,] -1.081616e+08 -9.843459e+07 -2.207031e+11 -1.419102e+07
## [5779,] -3.369211e+11 -2.502974e+11 -1.321629e+15 -2.467795e+09
## [5780,] -2.548354e+11 -2.262049e+11 -1.001141e+15 -2.482664e+09
## [5781,] -4.136294e+09 -4.326920e+09 -1.669478e+13 -1.101614e+08
## [5782,] -2.846089e+06 -1.806251e+06 -8.296078e+10 -6.384373e+06
## [5783,] -2.533166e+02 -1.858882e+04 -3.551017e+10 -7.190099e+06
## [5784,] -1.032563e+08 -9.844975e+07 -2.208162e+11 -1.421482e+07
## [5785,] -3.533449e+11 -2.692951e+11 -1.322306e+15 -2.802446e+09
## [5786,] -2.434971e+11 -2.185533e+11 -1.002167e+15 -1.906188e+09
## [5787,] -4.354704e+09 -3.666018e+09 -1.671191e+13 -9.637337e+07
## [5788,] -1.784218e+06 -2.010112e+06 -8.300331e+10 -6.186276e+06
## [5789,] -2.298202e+02 -3.465468e+04 -3.552837e+10 -7.099770e+06
## [5790,] -1.079446e+08 -9.610439e+07 -2.209294e+11 -1.370195e+07
## [5791,] -3.166750e+11 -2.692935e+11 -1.323662e+15 -3.382096e+09
## [5792,] -2.515669e+11 -2.185519e+11 -1.003195e+15 -2.370486e+09
## [5793,] -4.592908e+09 -4.466118e+09 -1.672904e+13 -1.030925e+08
## [5794,] -3.118816e+06 -1.603597e+06 -8.313096e+10 -6.317082e+06
## [5795,] -5.853470e+03 -5.640855e+04 -3.558301e+10 -7.156543e+06
## [5796,] -1.079922e+08 -1.009001e+08 -2.212692e+11 -1.405784e+07
## [5797,] -3.390840e+11 -2.990923e+11 -1.325019e+15 -3.147644e+09
## [5798,] -2.507531e+11 -2.110326e+11 -1.003709e+15 -2.238036e+09
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## [5802,] -1.072791e+08 -9.154236e+07 -2.214959e+11 -1.389926e+07
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## [5804,] -2.403010e+11 -2.110305e+11 -1.005251e+15 -2.237819e+09
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## [5810,] -2.499383e+11 -2.339801e+11 -1.005765e+15 -2.284030e+09
## [5811,] -4.383185e+09 -4.056886e+09 -1.678049e+13 -8.474288e+07
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## [5813,] -1.481885e+04 -8.867737e+03 -3.567417e+10 -7.227028e+06
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## [5815,] -3.379932e+11 -2.790460e+11 -1.329772e+15 -3.241858e+09
## [5816,] -2.467023e+11 -2.036408e+11 -1.007309e+15 -1.912609e+09
## [5817,] -4.509006e+09 -3.666944e+09 -1.679765e+13 -8.554369e+07
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## [5819,] -8.240443e+03 -9.157822e+03 -3.571066e+10 -7.062112e+06
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## [5851,] -3.456152e+11 -3.198158e+11 -1.334534e+15 -3.135996e+09
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## [5853,] -4.071107e+09 -4.897257e+09 -1.685780e+13 -9.869724e+07
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## [5882,] -2.371170e+11 -2.185361e+11 -1.014530e+15 -2.488771e+09
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## [5886,] -1.085752e+08 -9.412803e+07 -2.236548e+11 -1.370483e+07
## [5887,] -3.031653e+11 -2.990739e+11 -1.339987e+15 -3.325996e+09
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## [5893,] -2.869641e+11 -2.889646e+11 -1.342034e+15 -3.229690e+09
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## [5897,] -1.329473e+02 -1.197880e+04 -3.603996e+10 -7.264406e+06
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## [5904,] -1.101729e+08 -9.892039e+07 -2.243388e+11 -1.398831e+07
## [5905,] -3.358116e+11 -2.869624e+11 -1.343400e+15 -2.949841e+09
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## [5910,] -1.094685e+08 -9.195224e+07 -2.246812e+11 -1.436601e+07
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## [5913,] -4.567781e+09 -4.610322e+09 -1.699570e+13 -8.999089e+07
## [5914,] -2.612449e+06 -1.197380e+06 -8.441284e+10 -6.527768e+06
```

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## [5917,] -3.282904e+11 -2.692681e+11 -1.345450e+15 -2.520980e+09
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## [5953,] -3.347182e+11 -2.692578e+11 -1.354353e+15 -2.999338e+09
## [5954,] -2.442636e+11 -2.036160e+11 -1.025929e+15 -1.881946e+09
## [5955,] -4.871096e+09 -3.798188e+09 -1.710815e+13 -9.097635e+07
## [5956,] -2.848152e+06 -1.709007e+06 -8.501440e+10 -6.563427e+06
## [5957,] -2.285937e+03 -5.446722e+02 -3.638919e+10 -7.398818e+06
## [5958,] -1.104458e+08 -1.040031e+08 -2.262823e+11 -1.404974e+07
## [5959,] -3.444934e+11 -3.093358e+11 -1.355039e+15 -2.888015e+09
## [5960,] -2.499078e+11 -2.261693e+11 -1.026449e+15 -2.181492e+09
## [5961,] -4.697462e+09 -3.928387e+09 -1.711682e+13 -8.959856e+07
## [5962,] -1.612900e+06 -2.121245e+06 -8.501440e+10 -6.483424e+06
## [5963,] -1.035243e+04 -1.536698e+04 -3.638919e+10 -7.401487e+06
## [5964,] -1.081937e+08 -1.040031e+08 -2.262823e+11 -1.410362e+07
## [5965,] -3.434002e+11 -3.197898e+11 -1.355039e+15 -2.888015e+09
## [5966,] -2.482884e+11 -2.110017e+11 -1.026449e+15 -2.227193e+09
## [5967,] -4.387132e+09 -4.331847e+09 -1.711682e+13 -9.099093e+07
## [5968,] -1.631899e+06 -2.121245e+06 -8.501440e+10 -6.479627e+06
## [5969,] -1.850982e+02 -1.536698e+04 -3.638919e+10 -7.255404e+06
## [5970,] -1.132298e+08 -9.917896e+07 -2.262823e+11 -1.400492e+07
## [5971,] -3.455883e+11 -2.889490e+11 -1.355039e+15 -2.888015e+09
## [5972,] -2.539793e+11 -2.339505e+11 -1.026449e+15 -2.121294e+09
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## [5974,] -3.001192e+06 -1.341266e+06 -8.501440e+10 -6.682424e+06
## [5975,] -8.171244e+03 -5.727926e+03 -3.640762e+10 -7.357663e+06
## [5976,] -1.072161e+08 -1.040187e+08 -2.263969e+11 -1.373431e+07
## [5977,] -3.052020e+11 -3.304167e+11 -1.355725e+15 -3.813638e+09
## [5978,] -2.638845e+11 -2.418626e+11 -1.026969e+15 -2.503149e+09
## [5979,] -4.415007e+09 -4.195269e+09 -1.712549e+13 -9.180603e+07
## [5980,] -3.076533e+06 -4.036171e+05 -8.505745e+10 -6.449380e+06
## [5981,] -9.971587e+02 -7.121836e+02 -3.640762e+10 -7.262165e+06
## [5982,] -1.117231e+08 -9.448422e+07 -2.263969e+11 -1.422646e+07
## [5983,] -3.010960e+11 -3.412173e+11 -1.356411e+15 -2.576205e+09
## [5984,] -2.663898e+11 -2.185183e+11 -1.027489e+15 -2.486866e+09
## [5985,] -4.181820e+09 -4.195368e+09 -1.713416e+13 -9.772976e+07
## [5986,] -1.864387e+06 -1.705013e+06 -8.510051e+10 -6.659498e+06
## [5987,] -6.775660e+00 -1.380352e+05 -3.644449e+10 -7.446059e+06
## [5988,] -1.099914e+08 -9.685496e+07 -2.266262e+11 -1.441009e+07
## [5989,] -3.229564e+11 -2.596685e+11 -1.357785e+15 -2.729645e+09
## [5990,] -2.539762e+11 -2.261664e+11 -1.028529e+15 -2.128491e+09
## [5991,] -4.669230e+09 -3.928770e+09 -1.715150e+13 -8.985475e+07
## [5992,] -3.254121e+06 -1.011864e+06 -8.518667e+10 -6.609741e+06
## [5993,] -1.973379e+03 -5.102651e+04 -3.648137e+10 -7.236357e+06
## [5994,] -1.067842e+08 -9.688504e+07 -2.268556e+11 -1.377474e+07
## [5995,] -3.218963e+11 -3.197847e+11 -1.359158e+15 -3.475674e+09
## [5996,] -2.482830e+11 -2.185147e+11 -1.030090e+15 -2.478401e+09
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## [5999,] -1.541551e+02 -1.408888e+05 -3.653674e+10 -7.392044e+06
## [6000,] -1.110943e+08 -1.066001e+08 -2.273147e+11 -1.430881e+07
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## [6002,] -2.655476e+11 -2.185133e+11 -1.031132e+15 -2.350712e+09
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## [6005,] -9.000596e+03 -1.074673e+03 -3.655520e+10 -7.364214e+06
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## [6008,] -2.323764e+11 -2.185126e+11 -1.031653e+15 -2.374294e+09
## [6009,] -4.556120e+09 -3.799224e+09 -1.720360e+13 -9.785066e+07
## [6010,] -2.946480e+06 -1.498922e+06 -8.548856e+10 -6.618073e+06
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## [6012,] -1.088675e+08 -1.066317e+08 -2.275444e+11 -1.414881e+07
## [6013,] -3.293373e+11 -3.197803e+11 -1.362596e+15 -3.398730e+09
## [6014,] -2.515232e+11 -2.036070e+11 -1.032695e+15 -2.173066e+09
## [6015,] -4.713184e+09 -3.799507e+09 -1.722967e+13 -8.879771e+07
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## [6024,] -1.150087e+08 -1.042370e+08 -2.280042e+11 -1.424398e+07
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## [6033,] -3.985793e+09 -4.268150e+09 -3.627142e+11 -2.629976e+07
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## [6035,] -6.822593e+06 -4.668533e+06 -7.711057e+08 -4.953115e+04
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## [6037,] -3.216553e+11 -2.817473e+11 -2.871397e+13 -1.398737e+09
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## [6041,] -6.741958e+06 -5.322654e+06 -7.737901e+08 -5.119511e+04
## [6042,] -5.916359e+07 -5.272207e+07 -4.811732e+09 -9.437245e+05
## [6043,] -3.377072e+11 -2.917274e+11 -2.881393e+13 -1.645739e+09
## [6044,] -2.524921e+11 -1.986520e+11 -2.182670e+13 -1.248386e+09
## [6045,] -3.959502e+09 -3.999116e+09 -3.639769e+11 -2.598648e+07
## [6046,] -1.794384e+07 -1.452305e+07 -1.807770e+09 -1.305343e+04
## [6047,] -6.340504e+06 -5.322654e+06 -7.737901e+08 -4.921671e+04
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## [6050,] -2.574070e+11 -2.209368e+11 -2.182670e+13 -1.254124e+09
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## [6072,] -1.087135e+08 -1.018387e+08 -2.282343e+11 -1.428264e+07
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## [6075,] -4.542825e+09 -3.799978e+09 -1.727318e+13 -9.065462e+07
## [6076,] -2.257082e+06 -1.309596e+06 -8.579098e+10 -6.584242e+06
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## [6081,] -4.829702e+09 -4.333960e+09 -1.729931e+13 -9.129733e+07
## [6082,] -2.550474e+06 -1.865472e+06 -8.592076e+10 -6.531048e+06
## [6083,] -1.449328e+04 -5.669929e+04 -3.677714e+10 -7.350087e+06
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## [6085,] -3.346979e+11 -2.502431e+11 -1.370175e+15 -2.728208e+09
## [6086,] -2.531455e+11 -2.418468e+11 -1.037915e+15 -2.119746e+09
## [6087,] -4.991158e+09 -3.672406e+09 -1.730802e+13 -9.332317e+07
## [6088,] -3.017842e+06 -2.290544e+06 -8.600733e+10 -6.696179e+06
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## [6090,] -1.034018e+08 -1.019467e+08 -2.290405e+11 -1.455957e+07
## [6091,] -3.113923e+11 -2.596529e+11 -1.371555e+15 -3.408446e+09
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## [6097,] -3.261238e+11 -2.990346e+11 -1.372245e+15 -3.038120e+09
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## [6142,] -2.506731e+06 -1.631977e+06 -8.670146e+10 -6.701558e+06
## [6143,] -2.251037e+03 -1.096441e+04 -3.711131e+10 -7.561831e+06
## [6144,] -1.110730e+08 -9.977342e+07 -2.307728e+11 -1.431023e+07
## [6145,] -3.314556e+11 -2.789846e+11 -1.381929e+15 -2.955319e+09
## [6146,] -2.490677e+11 -2.184918e+11 -1.046818e+15 -2.186288e+09
```

```
## [6147,] -4.267127e+09 -4.064482e+09 -1.745649e+13 -9.256460e+07
## [6148,] -2.035325e+06 -2.035325e+06 -8.670146e+10 -6.582391e+06
## [6149,] -1.096441e+04 -2.364247e+04 -3.711131e+10 -7.411494e+06
## [6150,] -1.136097e+08 -1.021783e+08 -2.307728e+11 -1.454659e+07
## [6151,] -3.336045e+11 -2.474399e+11 -1.382622e+15 -2.479572e+09
## [6152,] -2.506888e+11 -1.963334e+11 -1.047343e+15 -2.285941e+09
## [6153,] -4.716017e+09 -3.932220e+09 -1.746524e+13 -8.898939e+07
## [6154,] -2.599620e+06 -1.108778e+06 -8.674493e+10 -6.690074e+06
## [6155,] -1.741946e+03 -9.101698e+04 -3.712992e+10 -7.576833e+06
## [6156,] -1.095808e+08 -1.121004e+08 -2.308885e+11 -1.424366e+07
## [6157,] -3.565964e+11 -2.889161e+11 -1.382622e+15 -3.661855e+09
## [6158,] -2.482579e+11 -1.892106e+11 -1.047343e+15 -1.935913e+09
## [6159,] -4.701758e+09 -3.802145e+09 -1.747400e+13 -9.239269e+07
## [6160,] -2.669771e+06 -9.557824e+05 -8.678842e+10 -6.636265e+06
## [6161,] -9.015096e+03 -1.604544e+05 -3.714853e+10 -7.510965e+06
## [6162,] -1.138975e+08 -9.980396e+07 -2.310042e+11 -1.426750e+07
## [6163,] -2.770174e+11 -3.746274e+11 -1.383315e+15 -3.450588e+09
## [6164,] -2.597028e+11 -2.339202e+11 -1.047868e+15 -2.285868e+09
## [6165,] -4.199229e+09 -4.474906e+09 -1.747400e+13 -9.543547e+07
## [6166,] -3.733640e+06 -2.030967e+06 -8.678842e+10 -6.690169e+06
## [6167,] -9.751391e+02 -6.421068e+04 -3.714853e+10 -7.478732e+06
## [6168,] -1.090963e+08 -1.046431e+08 -2.310042e+11 -1.453087e+07
## [6169,] -3.379230e+11 -2.889145e+11 -1.384008e+15 -3.341874e+09
## [6170,] -2.284592e+11 -2.261388e+11 -1.048393e+15 -2.285795e+09
## [6171,] -4.185774e+09 -5.354631e+09 -1.748276e+13 -9.060524e+07
## [6172,] -2.667275e+06 -1.821895e+06 -8.683191e+10 -6.713433e+06
## [6173,] -1.603323e+04 -1.620580e+03 -3.716715e+10 -7.531300e+06
## [6174,] -1.144253e+08 -1.022247e+08 -2.311200e+11 -1.428232e+07
## [6175,] -3.455505e+11 -3.303807e+11 -1.384008e+15 -2.844661e+09
## [6176,] -2.531301e+11 -2.035863e+11 -1.048393e+15 -2.247177e+09
## [6177,] -4.559421e+09 -4.336073e+09 -1.748276e+13 -9.080460e+07
## [6178,] -2.740857e+06 -1.267958e+06 -8.683191e+10 -6.779295e+06
## [6179,] -7.119228e+03 -4.206890e+04 -3.716715e+10 -7.574444e+06
## [6180,] -1.139301e+08 -9.983449e+07 -2.312358e+11 -1.429714e+07
## [6181,] -3.466462e+11 -2.889136e+11 -1.384701e+15 -2.582490e+09
## [6182,] -2.490646e+11 -2.184890e+11 -1.048919e+15 -2.348193e+09
## [6183,] -4.322400e+09 -4.199427e+09 -1.749152e+13 -9.607990e+07
## [6184,] -2.355296e+06 -1.622230e+06 -8.691894e+10 -6.705895e+06
## [6185,] -2.041061e+04 -2.483188e+04 -3.720440e+10 -7.491275e+06
## [6186,] -1.157418e+08 -1.046900e+08 -2.313517e+11 -1.425770e+07
## [6187,] -3.368368e+11 -3.092967e+11 -1.386783e+15 -3.234639e+09
## [6188,] -2.442281e+11 -2.035835e+11 -1.050495e+15 -2.014817e+09
## [6189,] -4.065164e+09 -4.336475e+09 -1.751781e+13 -1.013241e+08
## [6190,] -2.852797e+06 -1.259369e+06 -8.704957e+10 -6.806986e+06
## [6191,] -1.779084e+03 -9.427297e+04 -3.726031e+10 -7.498455e+06
## [6192,] -1.054730e+08 -9.516880e+07 -2.316993e+11 -1.452021e+07
## [6193,] -3.208041e+11 -3.411771e+11 -1.387477e+15 -3.005532e+09
## [6194,] -2.531262e+11 -2.580473e+11 -1.051021e+15 -2.216161e+09
## [6195,] -4.688043e+09 -4.759980e+09 -1.752658e+13 -8.988241e+07
## [6196,] -2.654809e+06 -1.811596e+06 -8.704957e+10 -6.756489e+06
## [6197,] -2.138059e+03 -1.659498e+02 -3.726031e+10 -7.581974e+06
## [6198,] -1.101947e+08 -9.751787e+07 -2.316993e+11 -1.468482e+07
## [6199,] -3.488401e+11 -2.789774e+11 -1.388171e+15 -3.118906e+09
## [6200,] -2.564009e+11 -2.109680e+11 -1.051547e+15 -2.363571e+09
## [6201,] -4.227098e+09 -4.336677e+09 -1.753535e+13 -9.310050e+07
## [6202,] -2.556042e+06 -1.809539e+06 -8.709313e+10 -6.636927e+06
## [6203,] -8.931154e+03 -2.070009e+05 -3.727896e+10 -7.540312e+06
## [6204,] -1.023174e+08 -1.097088e+08 -2.318153e+11 -1.470903e+07
```

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## [6205,] -3.250402e+11 -2.889095e+11 -1.388171e+15 -3.729099e+09
## [6206,] -2.621836e+11 -2.339151e+11 -1.051547e+15 -2.332128e+09
## [6207,] -4.645248e+09 -3.932986e+09 -1.753535e+13 -9.289863e+07
## [6208,] -2.872863e+06 -1.094342e+06 -8.713670e+10 -6.679358e+06
## [6209,] -2.010178e+04 -2.605050e+04 -3.729761e+10 -7.482652e+06
## [6210,] -1.062432e+08 -9.754806e+07 -2.319313e+11 -1.470572e+07
## [6211,] -3.218581e+11 -2.692174e+11 -1.389561e+15 -2.525430e+09
## [6212,] -2.215271e+11 -2.339128e+11 -1.053126e+15 -2.614166e+09
## [6213,] -4.560350e+09 -3.933274e+09 -1.756168e+13 -9.053692e+07
## [6214,] -2.477779e+06 -1.091147e+06 -8.722388e+10 -6.745244e+06
## [6215,] -4.582493e+03 -1.296838e+04 -3.733493e+10 -7.539431e+06
## [6216,] -1.110302e+08 -9.524336e+07 -2.322794e+11 -1.421353e+07
## [6217,] -3.124094e+11 -2.789741e+11 -1.390951e+15 -3.244727e+09
## [6218,] -2.284511e+11 -1.963246e+11 -1.054179e+15 -1.978095e+09
## [6219,] -4.717382e+09 -3.933466e+09 -1.757924e+13 -8.878200e+07
## [6220,] -2.661687e+06 -1.419545e+06 -8.735474e+10 -6.679832e+06
## [6221,] -6.697705e+03 -6.934357e+04 -3.739094e+10 -7.533163e+06
## [6222,] -1.125809e+08 -1.000025e+08 -2.325116e+11 -1.457927e+07
## [6223,] -3.144948e+11 -3.197432e+11 -1.392341e+15 -3.107994e+09
## [6224,] -2.245898e+11 -2.498665e+11 -1.054706e+15 -2.466763e+09
## [6225,] -4.268625e+09 -4.760718e+09 -1.758802e+13 -9.542506e+07
## [6226,] -1.817277e+06 -2.219403e+06 -8.735474e+10 -6.672124e+06
## [6227,] -3.982410e+04 -4.506298e+03 -3.739094e+10 -7.492823e+06
## [6228,] -1.135989e+08 -1.000025e+08 -2.325116e+11 -1.457927e+07
## [6229,] -3.444449e+11 -2.596296e+11 -1.392341e+15 -2.843683e+09
## [6230,] -2.245898e+11 -2.339106e+11 -1.054706e+15 -2.246308e+09
## [6231,] -4.935614e+09 -4.200517e+09 -1.758802e+13 -9.339118e+07
## [6232,] -2.936101e+06 -1.797225e+06 -8.735474e+10 -6.691403e+06
## [6233,] -1.979531e+04 -6.934357e+04 -3.739094e+10 -7.428504e+06
## [6234,] -1.118204e+08 -9.295148e+07 -2.325116e+11 -1.489163e+07
## [6235,] -3.389959e+11 -2.789717e+11 -1.393037e+15 -2.543814e+09
## [6236,] -2.547544e+11 -2.184797e+11 -1.055760e+15 -2.154844e+09
## [6237,] -4.703435e+09 -3.933849e+09 -1.761439e+13 -9.102318e+07
## [6238,] -2.440011e+06 -1.597024e+06 -8.748569e+10 -6.925200e+06
## [6239,] -3.553899e+03 -9.902364e+04 -3.744699e+10 -7.724682e+06
## [6240,] -1.010082e+08 -1.000484e+08 -2.328601e+11 -1.492781e+07
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## [6243,] -4.589391e+09 -4.200913e+09 -1.762318e+13 -9.548479e+07
## [6244,] -1.973102e+06 -1.595093e+06 -8.752936e+10 -6.703363e+06
## [6245,] -2.669847e+02 -1.710301e+05 -3.746568e+10 -7.536477e+06
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## [6250,] -2.673568e+06 -2.208033e+06 -8.757304e+10 -6.808134e+06
## [6251,] -1.007777e+03 -1.334186e+05 -3.748438e+10 -7.665119e+06
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## [6253,] -3.477292e+11 -3.303649e+11 -1.396517e+15 -3.470811e+09
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## [6256,] -2.453781e+06 -1.589308e+06 -8.766044e+10 -6.781109e+06
## [6257,] -1.456654e+03 -2.909429e+04 -3.752179e+10 -7.627449e+06
## [6258,] -1.104194e+08 -9.537764e+07 -2.333253e+11 -1.449231e+07
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## [6260,] -2.506728e+11 -1.822058e+11 -1.058397e+15 -2.245801e+09
## [6261,] -4.603894e+09 -3.676019e+09 -1.764957e+13 -9.148150e+07
## [6262,] -1.646221e+06 -1.987641e+06 -8.766044e+10 -6.603613e+06
```

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## [6263,] -2.278570e+04 -1.476681e+04 -3.752179e+10 -7.557158e+06
## [6264,] -1.119335e+08 -1.001095e+08 -2.333253e+11 -1.519301e+07
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## [6267,] -4.463160e+09 -3.934424e+09 -1.766718e+13 -8.405958e+07
## [6268,] -2.402533e+06 -1.778833e+06 -8.774788e+10 -6.824094e+06
## [6269,] -1.158215e+03 -4.890868e+04 -3.755922e+10 -7.579063e+06
## [6270,] -1.122192e+08 -9.540749e+07 -2.335580e+11 -1.477868e+07
## [6271,] -3.389888e+11 -3.092823e+11 -1.398607e+15 -3.211999e+09
## [6272,] -2.474320e+11 -2.184740e+11 -1.059981e+15 -1.870616e+09
## [6273,] -4.632656e+09 -3.804313e+09 -1.767598e+13 -1.016012e+08
## [6274,] -2.196693e+06 -1.776796e+06 -8.779162e+10 -6.577091e+06
## [6275,] -1.085588e+04 -6.642564e+02 -3.757794e+10 -7.548187e+06
## [6276,] -1.125053e+08 -1.074856e+08 -2.337909e+11 -1.461607e+07
## [6277,] -3.433420e+11 -2.692055e+11 -1.400002e+15 -3.107056e+09
## [6278,] -2.434127e+11 -2.035704e+11 -1.060509e+15 -1.898722e+09
## [6279,] -4.477462e+09 -3.804501e+09 -1.769360e+13 -9.195563e+07
## [6280,] -1.832803e+06 -1.226993e+06 -8.787912e+10 -6.766058e+06
## [6281,] -3.738320e+03 -7.425681e+04 -3.761539e+10 -7.613332e+06
## [6282,] -1.070215e+08 -1.125377e+08 -2.340239e+11 -1.469190e+07
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## [6284,] -2.555654e+11 -2.109547e+11 -1.061566e+15 -2.409706e+09
## [6285,] -4.519787e+09 -4.067308e+09 -1.771123e+13 -1.076584e+08
## [6286,] -2.460392e+06 -1.207166e+06 -8.796668e+10 -6.746863e+06
## [6287,] -3.650660e+01 -1.774087e+05 -3.765287e+10 -7.567690e+06
## [6288,] -1.112880e+08 -1.026268e+08 -2.341404e+11 -1.452395e+07
## [6289,] -2.979787e+11 -2.888915e+11 -1.403491e+15 -3.317892e+09
## [6290,] -2.506659e+11 -2.338988e+11 -1.063152e+15 -2.260550e+09
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## [6292,] -2.523794e+06 -1.218544e+06 -8.809808e+10 -6.840457e+06
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## [6294,] -1.141315e+08 -9.788041e+07 -2.344902e+11 -1.491801e+07
## [6295,] -3.378973e+11 -2.502057e+11 -1.404189e+15 -2.467945e+09
## [6296,] -2.563823e+11 -2.338973e+11 -1.064210e+15 -1.828230e+09
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## [6298,] -2.358299e+06 -1.386959e+06 -8.814191e+10 -7.076626e+06
## [6299,] -1.351492e+03 -1.063686e+05 -3.772788e+10 -7.668513e+06
## [6300,] -1.141479e+08 -1.026887e+08 -2.346068e+11 -1.446521e+07
## [6301,] -3.335762e+11 -2.691999e+11 -1.404888e+15 -3.558124e+09
## [6302,] -2.418092e+11 -2.184683e+11 -1.064210e+15 -2.229657e+09
## [6303,] -4.284112e+09 -4.478076e+09 -1.774651e+13 -9.244567e+07
## [6304,] -2.358299e+06 -1.760536e+06 -8.814191e+10 -6.608483e+06
## [6305,] -1.579108e+02 -1.687998e+04 -3.772788e+10 -7.369889e+06
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## [6308,] -2.654972e+11 -2.035649e+11 -1.064739e+15 -2.299062e+09
## [6309,] -4.548596e+09 -3.677223e+09 -1.776417e+13 -8.849292e+07
## [6310,] -2.351263e+06 -1.211805e+06 -8.827345e+10 -6.578126e+06
## [6311,] -9.628378e+01 -3.285793e+04 -3.778418e+10 -7.938952e+06
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## [6313,] -2.919008e+11 -3.197250e+11 -1.406984e+15 -3.726579e+09
## [6314,] -2.418062e+11 -2.261141e+11 -1.066328e+15 -2.252408e+09
## [6315,] -4.763038e+09 -4.068088e+09 -1.778183e+13 -9.290756e+07
## [6316,] -2.878772e+06 -9.042041e+05 -8.831731e+10 -6.790313e+06
## [6317,] -1.646483e+03 -1.436556e+05 -3.782174e+10 -7.818095e+06
## [6318,] -1.111807e+08 -1.003544e+08 -2.351905e+11 -1.470461e+07
## [6319,] -3.165683e+11 -2.789532e+11 -1.409083e+15 -3.669624e+09
## [6320,] -2.442039e+11 -2.498482e+11 -1.067387e+15 -2.416850e+09
```



```
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## [6322,] -2.723880e+06 -1.048469e+06 -8.840508e+10 -6.709125e+06
## [6323,] -2.701861e+03 -3.369420e+04 -3.784052e+10 -7.672170e+06
## [6324,] -1.089530e+08 -1.027972e+08 -2.354242e+11 -1.492826e+07
## [6325,] -3.103062e+11 -2.691944e+11 -1.409782e+15 -2.570236e+09
## [6326,] -2.434021e+11 -2.109462e+11 -1.067917e+15 -1.876646e+09
## [6327,] -4.506854e+09 -3.677687e+09 -1.780834e+13 -8.256320e+07
## [6328,] -2.140967e+06 -1.205085e+06 -8.844898e+10 -7.017913e+06
## [6329,] -2.693930e+03 -1.098862e+05 -3.785931e+10 -7.832135e+06
## [6330,] -1.084539e+08 -9.564649e+07 -2.354242e+11 -1.467047e+07
## [6331,] -3.218321e+11 -2.789515e+11 -1.410482e+15 -2.532498e+09
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## [6334,] -2.523211e+06 -1.551008e+06 -8.853682e+10 -6.728742e+06
## [6335,] -7.835038e+03 -8.106937e+04 -3.791572e+10 -7.626663e+06
## [6336,] -1.122733e+08 -9.804680e+07 -2.357749e+11 -1.478910e+07
## [6337,] -3.335674e+11 -2.691920e+11 -1.411883e+15 -3.231511e+09
## [6338,] -2.418017e+11 -2.109441e+11 -1.069508e+15 -2.472698e+09
## [6339,] -4.521226e+09 -3.936246e+09 -1.783487e+13 -7.498866e+07
## [6340,] -2.267012e+06 -1.369019e+06 -8.858075e+10 -6.861033e+06
## [6341,] -7.290541e+04 -1.559737e+03 -3.791572e+10 -7.618537e+06
## [6342,] -6.965948e+07 -8.879674e+07 -2.357749e+11 -1.471556e+07
## [6343,] -3.134264e+11 -3.411458e+11 -1.411883e+15 -3.242116e+09
## [6344,] -2.323234e+11 -2.184611e+11 -1.069508e+15 -2.814519e+09
## [6345,] -4.563550e+09 -4.068673e+09 -1.783487e+13 -9.279421e+07
## [6346,] -2.913936e+06 -1.200057e+06 -8.858075e+10 -6.814229e+06
## [6347,] -3.094780e+01 -3.482558e+04 -3.791572e+10 -7.670079e+06
## [6348,] -9.899701e+07 -1.028437e+08 -2.357749e+11 -1.499228e+07
## [6349,] -3.250105e+11 -2.888816e+11 -1.411883e+15 -4.316536e+09
## [6350,] -2.547336e+11 -2.261090e+11 -1.070039e+15 -2.205945e+09
## [6351,] -4.706160e+09 -3.936342e+09 -1.784372e+13 -9.160291e+07
## [6352,] -2.711283e+06 -1.040660e+06 -8.862470e+10 -6.822114e+06
## [6353,] -1.800595e+04 -5.626346e+04 -3.795334e+10 -7.705758e+06
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## [6355,] -3.103019e+11 -2.691904e+11 -1.413284e+15 -3.095059e+09
## [6356,] -2.253368e+11 -2.035567e+11 -1.071100e+15 -2.553798e+09
## [6357,] -4.822061e+09 -4.069063e+09 -1.787027e+13 -9.386439e+07
## [6358,] -2.464038e+06 -1.035988e+06 -8.875659e+10 -6.877055e+06
## [6359,] -3.597564e+04 -4.113383e+04 -3.799098e+10 -7.651695e+06
## [6360,] -1.095651e+08 -1.029057e+08 -2.362429e+11 -1.464729e+07
## [6361,] -3.464285e+11 -2.719393e+11 -2.881393e+13 -1.630650e+09
## [6362,] -2.590559e+11 -2.209368e+11 -2.182670e+13 -1.225562e+09
## [6363,] -4.406104e+09 -3.611847e+09 -3.639769e+11 -2.513982e+07
## [6364,] -1.813389e+07 -1.340843e+07 -1.807770e+09 -1.271489e+04
## [6365,] -7.129511e+06 -5.098700e+06 -7.737901e+08 -5.097336e+04
## [6366,] -6.158091e+07 -5.625487e+07 -4.811732e+09 -9.367625e+05
## [6367,] -3.453323e+11 -2.528461e+11 -2.881393e+13 -1.660897e+09
## [6368,] -2.468179e+11 -2.364513e+11 -2.182670e+13 -1.254124e+09
## [6369,] -4.295646e+09 -3.487139e+09 -3.639769e+11 -2.535017e+07
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## [6374,] -2.500524e+11 -2.364513e+11 -2.182670e+13 -1.248386e+09
## [6375,] -3.999116e+09 -3.999116e+09 -3.639769e+11 -2.545568e+07
## [6376,] -1.750428e+07 -1.568217e+07 -1.807770e+09 -2.033122e+04
## [6377,] -6.439712e+06 -6.023396e+06 -7.737901e+08 -5.783517e+04
## [6378,] -5.934782e+07 -5.806423e+07 -4.811732e+09 -8.641050e+05
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## [6381,] -4.336903e+09 -3.867836e+09 -3.639769e+11 -2.160054e+07
## [6382,] -1.756674e+07 -1.452305e+07 -1.807770e+09 -1.928184e+04
## [6383,] -6.767458e+06 -6.023396e+06 -7.737901e+08 -5.830803e+04
## [6384,] -6.008760e+07 -5.447415e+07 -4.811732e+09 -8.618818e+05
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## [6389,] -6.999124e+06 -5.785002e+06 -7.737901e+08 -5.925951e+04
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## [6391,] -3.113394e+11 -2.691888e+11 -1.414685e+15 -3.424698e+09
## [6392,] -2.292024e+11 -2.261061e+11 -1.072163e+15 -2.048556e+09
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## [6397,] -3.000029e+11 -3.092619e+11 -1.415386e+15 -3.402827e+09
## [6398,] -2.482213e+11 -2.184568e+11 -1.072694e+15 -2.376391e+09
## [6399,] -4.635153e+09 -4.479712e+09 -1.788799e+13 -9.531923e+07
## [6400,] -2.601591e+06 -1.537714e+06 -8.884458e+10 -6.826490e+06
## [6401,] -8.667456e+03 -5.772276e+04 -3.802864e+10 -7.649294e+06
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## [6415,] -3.239401e+11 -2.888734e+11 -1.418895e+15 -3.348235e+09
## [6416,] -2.539085e+11 -2.184540e+11 -1.074820e+15 -2.282143e+09
## [6417,] -4.621328e+09 -3.540555e+09 -1.792345e+13 -8.255353e+07
## [6418,] -2.199593e+06 -1.183374e+06 -8.902068e+10 -7.278393e+06
## [6419,] -1.678482e+04 -1.165706e+05 -3.810402e+10 -7.745195e+06
## [6420,] -1.079297e+08 -1.005995e+08 -2.370631e+11 -1.494620e+07
## [6421,] -3.186564e+11 -2.789411e+11 -1.419597e+15 -2.771390e+09
## [6422,] -2.506483e+11 -2.035511e+11 -1.075352e+15 -2.026173e+09
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## [6424,] -2.444883e+06 -1.180051e+06 -8.910880e+10 -6.924846e+06
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## [6426,] -1.069532e+08 -1.006148e+08 -2.371804e+11 -1.493361e+07
## [6427,] -3.271288e+11 -2.789402e+11 -1.420299e+15 -3.305055e+09
## [6428,] -2.449942e+11 -2.035504e+11 -1.075884e+15 -2.220419e+09
## [6429,] -4.522459e+09 -4.621536e+09 -1.794119e+13 -9.705152e+07
## [6430,] -3.383972e+06 -1.023581e+06 -8.910880e+10 -6.873913e+06
## [6431,] -1.153031e+03 -5.994675e+04 -3.814174e+10 -7.701881e+06
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## [6448,] -2.057888e+06 -1.342328e+06 -8.924106e+10 -6.714795e+06
## [6449,] -4.988275e+02 -8.818090e+04 -3.821723e+10 -7.667150e+06
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## [6451,] -3.281914e+11 -2.789362e+11 -1.423813e+15 -2.950336e+09
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## [6457,] -3.324750e+11 -2.989711e+11 -1.425220e+15 -3.021467e+09
## [6458,] -2.425858e+11 -2.338759e+11 -1.079612e+15 -2.297011e+09
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## [6460,] -2.639393e+06 -8.668149e+05 -8.946171e+10 -6.874683e+06
## [6461,] -2.442504e+02 -2.336135e+04 -3.829280e+10 -7.812447e+06
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## [6466,] -1.297522e+06 -3.609249e+06 -8.950587e+10 -6.800672e+06
## [6467,] -1.371756e+03 -1.597207e+05 -3.833061e+10 -7.678961e+06
## [6468,] -1.101042e+08 -1.056303e+08 -2.383548e+11 -1.468848e+07
## [6469,] -3.324723e+11 -3.092474e+11 -1.427332e+15 -2.929708e+09
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## [6471,] -4.809444e+09 -3.938356e+09 -1.803003e+13 -8.991446e+07
## [6472,] -2.085428e+06 -1.507541e+06 -8.955004e+10 -6.914040e+06
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## [6483,] -4.651500e+09 -4.342717e+09 -1.806562e+13 -1.037674e+08
## [6484,] -3.236501e+06 -1.322922e+06 -8.972685e+10 -6.758428e+06
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## [6489,] -4.781088e+09 -4.071403e+09 -1.808344e+13 -9.626292e+07
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```

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## [6524,] -2.547073e+11 -1.891595e+11 -1.088157e+15 -2.241747e+09
## [6525,] -4.072085e+09 -3.939602e+09 -1.814585e+13 -9.534319e+07
## [6526,] -2.387868e+06 -2.528166e+06 -9.016961e+10 -7.021703e+06
## [6527,] -5.895620e+03 -1.346017e+04 -3.859581e+10 -7.875435e+06
## [6528,] -1.120956e+08 -1.133661e+08 -2.400039e+11 -1.474301e+07
## [6529,] -3.207427e+11 -3.411137e+11 -1.437207e+15 -2.958890e+09
## [6530,] -2.596429e+11 -2.498176e+11 -1.088692e+15 -2.120460e+09
## [6531,] -4.738606e+09 -4.206858e+09 -1.815477e+13 -8.932435e+07
## [6532,] -2.387868e+06 -1.140543e+06 -9.016961e+10 -6.998008e+06
## [6533,] -3.268541e+03 -1.305316e+05 -3.859581e+10 -7.847925e+06
## [6534,] -1.100776e+08 -8.931594e+07 -2.400039e+11 -1.471546e+07
## [6535,] -3.389381e+11 -2.691619e+11 -1.438621e+15 -2.700981e+09
## [6536,] -2.393859e+11 -2.260821e+11 -1.089763e+15 -2.350353e+09
## [6537,] -4.179945e+09 -4.624238e+09 -1.817263e+13 -9.993875e+07
## [6538,] -1.740397e+06 -8.399912e+05 -9.030265e+10 -6.782956e+06
## [6539,] -9.082097e+01 -9.892748e+04 -3.865275e+10 -7.729287e+06
## [6540,] -1.088736e+08 -1.034490e+08 -2.403581e+11 -1.530811e+07
## [6541,] -3.281713e+11 -2.888488e+11 -1.440035e+15 -3.249253e+09
## [6542,] -2.354321e+11 -2.184326e+11 -1.090834e+15 -2.445532e+09
## [6543,] -4.782356e+09 -3.940082e+09 -1.819049e+13 -9.562241e+07
## [6544,] -2.220131e+06 -1.660606e+06 -9.034702e+10 -6.935403e+06
## [6545,] -1.276306e+03 -9.940874e+04 -3.867174e+10 -7.900871e+06
## [6546,] -1.073962e+08 -1.083906e+08 -2.404762e+11 -1.478489e+07
## [6547,] -3.030442e+11 -2.989536e+11 -1.440035e+15 -3.367180e+09
## [6548,] -2.637895e+11 -1.962778e+11 -1.090834e+15 -2.358076e+09
## [6549,] -5.166137e+09 -3.555755e+09 -1.819049e+13 -9.460167e+07
## [6550,] -2.614030e+06 -2.287307e+06 -9.034702e+10 -6.998396e+06
## [6551,] -4.904359e+03 -4.716705e+04 -3.867174e+10 -7.801900e+06
## [6552,] -1.149657e+08 -1.034645e+08 -2.404762e+11 -1.501585e+07
```

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## [6553,] -3.144366e+11 -3.092321e+11 -1.440035e+15 -3.324054e+09
## [6554,] -2.230056e+11 -2.498146e+11 -1.090834e+15 -2.469660e+09
## [6555,] -4.724732e+09 -4.483293e+09 -1.819943e+13 -9.299462e+07
## [6556,] -2.399123e+06 -1.296686e+06 -9.039140e+10 -6.849349e+06
## [6557,] -8.312720e+03 -7.169731e+04 -3.870974e+10 -7.912225e+06
## [6558,] -1.074437e+08 -1.084383e+08 -2.408306e+11 -1.509865e+07
## [6559,] -2.928674e+11 -3.092296e+11 -1.442158e+15 -3.609067e+09
## [6560,] -2.588114e+11 -2.109139e+11 -1.092442e+15 -2.534349e+09
## [6561,] -4.667771e+09 -3.940562e+09 -1.823519e+13 -9.487980e+07
## [6562,] -2.298322e+06 -9.731926e+05 -9.056903e+10 -7.050274e+06
## [6563,] -1.170280e+04 -7.293017e+04 -3.876677e+10 -7.900287e+06
## [6564,] -9.849130e+07 -1.059919e+08 -2.410671e+11 -1.532526e+07
## [6565,] -3.249713e+11 -3.520790e+11 -1.443574e+15 -3.081049e+09
## [6566,] -2.385876e+11 -1.962745e+11 -1.093515e+15 -2.279589e+09
## [6567,] -4.413893e+09 -4.483703e+09 -1.823519e+13 -9.590203e+07
## [6568,] -2.056310e+06 -1.650773e+06 -9.056903e+10 -6.834127e+06
## [6569,] -4.669694e+04 -1.510293e+04 -3.876677e+10 -7.836986e+06
## [6570,] -1.047635e+08 -1.135126e+08 -2.410671e+11 -1.512914e+07
## [6571,] -3.165262e+11 -2.595727e+11 -1.443574e+15 -3.185383e+09
## [6572,] -2.417679e+11 -2.035277e+11 -1.093515e+15 -2.608231e+09
## [6573,] -4.710774e+09 -3.810254e+09 -1.823519e+13 -9.692974e+07
## [6574,] -1.767762e+06 -1.125901e+06 -9.056903e+10 -6.865357e+06
## [6575,] -4.101590e+03 -1.355482e+05 -3.876677e+10 -7.817771e+06
## [6576,] -1.092192e+08 -1.011213e+08 -2.410671e+11 -1.533463e+07
## [6577,] -3.303060e+11 -2.989494e+11 -1.443574e+15 -3.227603e+09
## [6578,] -2.385876e+11 -2.184290e+11 -1.093515e+15 -2.437138e+09
## [6579,] -5.002501e+09 -4.344631e+09 -1.823519e+13 -9.285177e+07
## [6580,] -2.745514e+06 -1.648810e+06 -9.061347e+10 -7.105928e+06
## [6581,] -9.309109e+02 -1.361115e+05 -3.878579e+10 -7.937720e+06
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## [6583,] -3.165253e+11 -2.989486e+11 -1.444282e+15 -3.280681e+09
## [6584,] -2.441662e+11 -2.035270e+11 -1.094051e+15 -2.453107e+09
## [6585,] -4.667875e+09 -4.207849e+09 -1.824414e+13 -9.673879e+07
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## [6594,] -1.047948e+08 -9.875933e+07 -2.413037e+11 -1.522496e+07
## [6595,] -3.154766e+11 -3.196784e+11 -1.444990e+15 -2.978286e+09
## [6596,] -2.393785e+11 -2.260748e+11 -1.095124e+15 -2.381173e+09
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## [6599,] -1.420777e+03 -1.037926e+05 -3.884288e+10 -7.873368e+06
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## [6605,] -5.469411e+04 -3.062574e+04 -3.884288e+10 -7.873368e+06
## [6606,] -1.123060e+08 -1.011828e+08 -2.415403e+11 -1.489319e+07
## [6607,] -3.154749e+11 -2.691531e+11 -1.446408e+15 -3.060053e+09
## [6608,] -2.579821e+11 -2.035249e+11 -1.095661e+15 -2.310384e+09
## [6609,] -4.812412e+09 -4.208246e+09 -1.827995e+13 -8.932873e+07
## [6610,] -1.878269e+06 -1.640970e+06 -9.079132e+10 -6.975709e+06
```

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## [6611,] -4.605269e+03 -1.042855e+05 -3.886192e+10 -8.040970e+06
## [6612,] -1.105537e+08 -9.644028e+07 -2.416587e+11 -1.448629e+07
## [6613,] -3.196758e+11 -2.595688e+11 -1.447117e+15 -2.585051e+09
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## [6616,] -2.424090e+06 -1.640970e+06 -9.079132e+10 -7.078513e+06
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## [6618,] -1.105537e+08 -9.644028e+07 -2.416587e+11 -1.495457e+07
## [6619,] -3.165219e+11 -2.888405e+11 -1.447117e+15 -2.998415e+09
## [6620,] -2.506184e+11 -1.891495e+11 -1.096198e+15 -3.011762e+09
## [6621,] -4.740184e+09 -3.941137e+09 -1.828890e+13 -9.971896e+07
## [6622,] -2.083839e+06 -1.451773e+06 -9.088031e+10 -6.881673e+06
## [6623,] -2.643171e+04 -6.272104e+03 -3.890001e+10 -7.850460e+06
## [6624,] -1.126084e+08 -9.647030e+07 -2.418956e+11 -1.511490e+07
## [6625,] -3.281608e+11 -2.501575e+11 -1.448535e+15 -2.353402e+09
## [6626,] -2.679627e+11 -2.035229e+11 -1.097273e+15 -2.501097e+09
## [6627,] -4.812624e+09 -4.484419e+09 -1.829786e+13 -9.973422e+07
## [6628,] -1.240710e+06 -2.255062e+06 -9.096934e+10 -6.676041e+06
## [6629,] -5.748755e+03 -1.406594e+05 -3.893812e+10 -8.019368e+06
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## [6632,] -2.506146e+11 -2.035208e+11 -1.098885e+15 -2.081946e+09
## [6633,] -4.798537e+09 -3.557213e+09 -1.833372e+13 -9.443238e+07
## [6634,] -1.553979e+06 -1.629245e+06 -9.105842e+10 -6.936949e+06
## [6635,] -5.982739e+03 -1.418081e+05 -3.897624e+10 -7.950376e+06
## [6636,] -1.136918e+08 -1.086453e+08 -2.423697e+11 -1.508286e+07
## [6637,] -3.432766e+11 -2.691476e+11 -1.451374e+15 -3.163432e+09
## [6638,] -2.449602e+11 -2.184204e+11 -1.099961e+15 -2.240156e+09
## [6639,] -4.456937e+09 -4.074231e+09 -1.834269e+13 -9.835201e+07
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## [6641,] -2.300768e+04 -3.280255e+04 -3.899532e+10 -7.929800e+06
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## [6645,] -4.332353e+09 -4.209238e+09 -1.836962e+13 -1.053690e+08
## [6646,] -2.087724e+06 -1.101708e+06 -9.123670e+10 -6.960927e+06
## [6647,] -1.000408e+04 -1.441194e+05 -3.905256e+10 -8.039791e+06
## [6648,] -1.104628e+08 -9.895687e+07 -2.428442e+11 -1.536819e+07
## [6649,] -3.421818e+11 -3.196671e+11 -1.454216e+15 -2.967040e+09
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## [6651,] -4.770002e+09 -3.811669e+09 -1.836962e+13 -9.146422e+07
## [6652,] -2.400354e+06 -2.241313e+06 -9.123670e+10 -7.091400e+06
## [6653,] -9.856394e+02 -3.363812e+04 -3.905256e+10 -7.973162e+06
## [6654,] -1.153101e+08 -1.037913e+08 -2.429629e+11 -1.482550e+07
## [6655,] -3.050821e+11 -3.196663e+11 -1.454926e+15 -2.987298e+09
## [6656,] -2.116470e+11 -2.417559e+11 -1.102114e+15 -2.516660e+09
## [6657,] -4.527496e+09 -3.683621e+09 -1.837860e+13 -9.268405e+07
## [6658,] -1.755106e+06 -1.619506e+06 -9.128130e+10 -6.847365e+06
## [6659,] -5.092258e+03 -1.447002e+05 -3.907165e+10 -7.861511e+06
## [6660,] -1.112509e+08 -9.405005e+07 -2.430816e+11 -1.456530e+07
## [6661,] -3.378315e+11 -2.989344e+11 -1.456349e+15 -3.089875e+09
## [6662,] -2.362028e+11 -2.184161e+11 -1.103192e+15 -1.900464e+09
## [6663,] -4.034828e+09 -4.770318e+09 -1.839656e+13 -1.024287e+08
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## [6667,] -3.345882e+11 -2.888290e+11 -1.457060e+15 -2.976868e+09
## [6668,] -2.530501e+11 -2.338426e+11 -1.103730e+15 -2.262742e+09
```

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## [6669,] -4.712767e+09 -3.942385e+09 -1.840555e+13 -1.166786e+08
## [6670,] -1.993765e+06 -1.429760e+06 -9.141516e+10 -6.957379e+06
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## [6680,] -2.409529e+11 -2.108957e+11 -1.106427e+15 -2.459405e+09
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## [6682,] -2.176535e+06 -1.248416e+06 -9.163847e+10 -7.148001e+06
## [6683,] -1.040224e+04 -1.493882e+05 -3.922453e+10 -8.014825e+06
## [6684,] -1.111114e+08 -9.438620e+07 -2.439136e+11 -1.502994e+07
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## [6689,] -1.159067e+04 -1.928883e+03 -3.924366e+10 -7.916679e+06
## [6690,] -1.108753e+08 -9.674068e+07 -2.440326e+11 -1.559783e+07
## [6691,] -3.154869e+11 -3.020231e+11 -1.445699e+13 -1.618460e+09
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## [6695,] -7.371723e+06 -5.931480e+06 -3.882385e+08 -9.777975e+03
## [6696,] -6.219696e+07 -4.427525e+07 -2.414220e+09 -6.828164e+05
## [6697,] -3.175844e+11 -2.818828e+11 -1.445699e+13 -1.625968e+09
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## [6699,] -4.430780e+09 -3.229689e+09 -1.826204e+11 -2.305782e+07
## [6700,] -1.826821e+07 -1.325108e+07 -9.114754e+08 -3.510895e+02
## [6701,] -7.799842e+06 -5.927758e+06 -3.901439e+08 -8.427336e+03
## [6702,] -5.559907e+07 -5.794318e+07 -2.426069e+09 -6.412249e+05
## [6703,] -3.144391e+11 -3.335347e+11 -1.459907e+13 -1.633369e+09
## [6704,] -2.534357e+11 -2.365746e+11 -1.105887e+13 -1.048264e+09
## [6705,] -4.197270e+09 -3.983089e+09 -1.844152e+11 -2.565468e+07
## [6706,] -1.857519e+07 -1.549993e+07 -9.204113e+08 -3.147938e+01
## [6707,] -7.492965e+06 -6.161457e+06 -3.939688e+08 -1.094298e+04
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## [6714,] -5.636106e+07 -5.265107e+07 -2.473754e+09 -6.911334e+05
## [6715,] -3.367694e+11 -2.918620e+11 -1.481350e+13 -1.551373e+09
## [6716,] -2.526173e+11 -1.915960e+11 -1.122130e+13 -1.194723e+09
## [6717,] -4.293039e+09 -3.386635e+09 -1.871238e+11 -2.380407e+07
## [6718,] -1.849781e+07 -1.433612e+07 -9.293909e+08 -4.058657e+02
## [6719,] -7.271402e+06 -6.153872e+06 -3.978124e+08 -9.564615e+03
## [6720,] -5.817211e+07 -5.265107e+07 -2.473754e+09 -6.911334e+05
## [6721,] -3.142960e+11 -2.817457e+11 -2.891406e+13 -1.370877e+09
## [6722,] -2.444051e+11 -1.986514e+11 -2.190255e+13 -1.202897e+09
## [6723,] -4.282037e+09 -3.364711e+09 -3.652418e+11 -2.493798e+07
## [6724,] -1.681828e+07 -1.451722e+07 -1.814053e+09 -1.688156e+04
## [6725,] -6.336656e+06 -5.319129e+06 -7.764792e+08 -5.424898e+04
## [6726,] -5.991405e+07 -4.931456e+07 -4.828454e+09 -8.856812e+05
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## [6728,] -2.404114e+11 -2.059480e+11 -2.190255e+13 -1.136323e+09
## [6729,] -4.337004e+09 -3.487230e+09 -3.652418e+11 -2.199862e+07
## [6730,] -1.615213e+07 -1.567612e+07 -1.814053e+09 -1.846735e+04
## [6731,] -6.287356e+06 -6.763483e+06 -7.764792e+08 -5.726034e+04
## [6732,] -6.310468e+07 -5.807587e+07 -4.828454e+09 -8.522185e+05
## [6733,] -3.122095e+11 -3.122095e+11 -2.891406e+13 -1.683703e+09
## [6734,] -2.574055e+11 -2.059473e+11 -2.197854e+13 -1.202844e+09
## [6735,] -4.159742e+09 -3.364800e+09 -3.665089e+11 -2.557686e+07
## [6736,] -1.724285e+07 -1.285684e+07 -1.820346e+09 -1.887995e+04
## [6737,] -6.632565e+06 -5.544222e+06 -7.791730e+08 -5.369230e+04
## [6738,] -6.293896e+07 -4.603124e+07 -4.861985e+09 -1.009743e+06
## [6739,] -3.344627e+11 -2.817441e+11 -2.911486e+13 -1.880212e+09
## [6740,] -2.549414e+11 -1.914850e+11 -2.205466e+13 -1.353528e+09
## [6741,] -3.599553e+09 -4.833128e+09 -3.677782e+11 -2.687093e+07
## [6742,] -1.650140e+07 -1.566402e+07 -1.826650e+09 -1.255961e+04
## [6743,] -6.806635e+06 -5.312082e+06 -7.818714e+08 -5.067983e+04
## [6744,] -5.919886e+07 -5.993771e+07 -4.861985e+09 -9.528503e+05
## [6745,] -3.486235e+11 -2.623035e+11 -2.911486e+13 -1.622947e+09
## [6746,] -2.380294e+11 -2.209346e+11 -2.205466e+13 -1.294499e+09
## [6747,] -4.518272e+09 -3.364888e+09 -3.677782e+11 -2.505792e+07
## [6748,] -1.644086e+07 -1.625992e+07 -1.826650e+09 -1.189999e+04
## [6749,] -6.578204e+06 -6.012149e+06 -7.818714e+08 -5.045920e+04
## [6750,] -6.086773e+07 -5.103137e+07 -4.861985e+09 -9.481837e+05
## [6751,] -3.711092e+11 -3.302841e+11 -1.461332e+15 -2.935830e+09
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## [6753,] -4.360962e+09 -4.627564e+09 -1.845951e+13 -1.033866e+08
## [6754,] -2.174281e+06 -1.085726e+06 -9.168317e+10 -7.032917e+06
## [6755,] -6.240687e+03 -1.505719e+05 -3.926280e+10 -8.023480e+06
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## [6757,] -3.292128e+11 -2.989277e+11 -1.462044e+15 -3.267829e+09
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## [6759,] -4.917063e+09 -3.890844e+09 -1.848652e+13 -9.045586e+07
## [6760,] -2.301288e+06 -1.413361e+06 -9.181733e+10 -7.017394e+06
## [6761,] -7.429326e+03 -2.385760e+05 -3.932024e+10 -7.851196e+06
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## [6765,] -5.154832e+09 -4.210626e+09 -1.849553e+13 -9.307726e+07
## [6766,] -2.507021e+06 -1.239893e+06 -9.186206e+10 -6.848613e+06
## [6767,] -4.535053e+03 -1.169884e+05 -3.933939e+10 -7.985258e+06
## [6768,] -1.210054e+08 -9.681586e+07 -2.446278e+11 -1.496350e+07
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## [6770,] -2.354054e+11 -2.108908e+11 -1.110207e+15 -2.292838e+09
## [6771,] -4.656713e+09 -3.943536e+09 -1.851355e+13 -9.250178e+07
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## [6774,] -1.137788e+08 -9.450502e+07 -2.448662e+11 -1.509596e+07
## [6775,] -3.249417e+11 -2.788862e+11 -1.467751e+15 -3.016428e+09
## [6776,] -2.465520e+11 -2.184047e+11 -1.111829e+15 -2.058134e+09
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## [6785,] -2.116851e+04 -2.261993e+04 -3.945442e+10 -7.972359e+06
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## [6809,] -2.853916e+04 -4.132001e+04 -3.955040e+10 -8.136053e+06
## [6810,] -1.111330e+08 -9.935254e+07 -2.459400e+11 -1.534570e+07
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## [6812,] -2.385570e+11 -2.183997e+11 -1.115619e+15 -2.482307e+09
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## [6836,] -2.629185e+11 -2.260450e+11 -1.117245e+15 -2.330885e+09
## [6837,] -4.488206e+09 -4.349064e+09 -1.863091e+13 -9.779981e+07
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## [6840,] -1.104577e+08 -9.705661e+07 -2.465376e+11 -1.516989e+07
## [6841,] -3.206951e+11 -3.091888e+11 -1.476333e+15 -3.025666e+09
## [6842,] -2.738424e+11 -1.962433e+11 -1.118330e+15 -2.449702e+09
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## [6848,] -2.441314e+11 -2.034953e+11 -1.118872e+15 -2.671222e+09
## [6849,] -4.730196e+09 -4.077744e+09 -1.866710e+13 -9.518679e+07
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## [6854,] -2.489639e+11 -1.962420e+11 -1.119415e+15 -2.027835e+09
## [6855,] -4.335673e+09 -4.488616e+09 -1.866710e+13 -9.295354e+07
## [6856,] -2.750074e+06 -1.952462e+06 -9.271419e+10 -7.286608e+06
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## [6862,] -2.096654e+06 -9.134703e+05 -9.280412e+10 -7.335204e+06
## [6863,] -2.920909e+04 -4.416305e+04 -3.972347e+10 -8.225908e+06
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## [6865,] -2.908105e+11 -3.196369e+11 -1.479199e+15 -3.276393e+09
## [6866,] -2.457342e+11 -2.034925e+11 -1.121044e+15 -2.260416e+09
## [6867,] -4.744920e+09 -4.078036e+09 -1.869426e+13 -9.239313e+07
## [6868,] -2.137838e+06 -1.552150e+06 -9.284910e+10 -7.234655e+06
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## [6886,] -2.329286e+06 -1.038478e+06 -9.302913e+10 -7.155030e+06
## [6887,] -2.719741e+04 -9.739531e+04 -3.981978e+10 -8.132714e+06
## [6888,] -1.123711e+08 -1.068590e+08 -2.476151e+11 -1.585558e+07
## [6889,] -3.217428e+11 -3.302568e+11 -1.483503e+15 -3.004356e+09
## [6890,] -2.361746e+11 -2.338153e+11 -1.123761e+15 -2.832178e+09
## [6891,] -4.817820e+09 -3.687332e+09 -1.873957e+13 -9.592017e+07
## [6892,] -2.061924e+06 -1.542645e+06 -9.307416e+10 -7.211096e+06
## [6893,] -3.929327e+03 -2.745001e+04 -3.983905e+10 -8.064467e+06
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## [6895,] -3.270511e+11 -2.788684e+11 -1.483503e+15 -3.014582e+09
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## [6897,] -4.503574e+09 -4.774436e+09 -1.874864e+13 -9.248130e+07
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```

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## [6904,] -2.187913e+06 -8.877132e+05 -9.316426e+10 -7.368354e+06
## [6905,] -5.206116e+00 -1.396112e+04 -3.987762e+10 -8.218765e+06
## [6906,] -1.144590e+08 -9.723736e+07 -2.479748e+11 -1.549472e+07
## [6907,] -3.487164e+11 -2.989009e+11 -1.484939e+15 -3.169879e+09
## [6908,] -2.457282e+11 -2.260342e+11 -1.125393e+15 -2.168235e+09
## [6909,] -4.602653e+09 -3.815822e+09 -1.876679e+13 -9.230946e+07
## [6910,] -1.970699e+06 -1.189366e+06 -9.320933e+10 -7.223413e+06
## [6911,] -7.155367e+03 -1.326382e+05 -3.989691e+10 -8.175386e+06
## [6912,] -1.144753e+08 -1.044618e+08 -2.480947e+11 -1.513543e+07
## [6913,] -3.302542e+11 -2.989001e+11 -1.485657e+15 -3.045110e+09
## [6914,] -2.449239e+11 -2.183861e+11 -1.125937e+15 -2.432613e+09
## [6915,] -4.688360e+09 -4.489845e+09 -1.877586e+13 -9.252539e+07
## [6916,] -1.885732e+06 -1.030706e+06 -9.325440e+10 -7.287796e+06
## [6917,] -1.432454e+04 -4.743294e+04 -3.991621e+10 -8.165731e+06
## [6918,] -1.139801e+08 -1.020455e+08 -2.482147e+11 -1.517865e+07
## [6919,] -3.388785e+11 -2.788652e+11 -1.486376e+15 -3.096672e+09
## [6920,] -2.093824e+11 -2.746800e+11 -1.126482e+15 -2.545849e+09
## [6921,] -4.420089e+09 -4.489947e+09 -1.878494e+13 -9.375225e+07
## [6922,] -2.225417e+06 -1.186035e+06 -9.329949e+10 -7.275820e+06
## [6923,] -1.571366e+04 -2.873052e+04 -3.993551e+10 -8.189742e+06
## [6924,] -1.127223e+08 -1.044931e+08 -2.483347e+11 -1.539986e+07
## [6925,] -3.465158e+11 -2.788644e+11 -1.487094e+15 -2.892610e+09
## [6926,] -2.546526e+11 -2.183854e+11 -1.126482e+15 -2.198415e+09
## [6927,] -4.950011e+09 -3.816011e+09 -1.878494e+13 -9.681715e+07
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## [6929,] -3.605685e+04 -2.158546e+05 -3.995481e+10 -8.023688e+06
## [6930,] -1.074811e+08 -1.094752e+08 -2.485748e+11 -1.544006e+07
## [6931,] -3.620457e+11 -3.091743e+11 -1.488532e+15 -2.983373e+09
## [6932,] -2.199029e+11 -2.417206e+11 -1.127571e+15 -2.432387e+09
## [6933,] -4.818563e+09 -3.816199e+09 -1.880310e+13 -1.010111e+08
## [6934,] -3.040931e+06 -8.805282e+05 -9.338970e+10 -7.028702e+06
## [6935,] -2.004982e+04 -1.348739e+05 -3.997412e+10 -8.240686e+06
## [6936,] -1.114877e+08 -9.496614e+07 -2.485748e+11 -1.571398e+07
## [6937,] -3.367091e+11 -2.788628e+11 -1.488532e+15 -3.044773e+09
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## [6943,] -3.421380e+11 -2.988959e+11 -1.489251e+15 -2.695345e+09
## [6944,] -2.497619e+11 -2.260305e+11 -1.128116e+15 -2.221078e+09
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## [6946,] -2.216307e+06 -1.715406e+06 -9.347996e+10 -7.260131e+06
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## [6949,] -3.476094e+11 -2.691040e+11 -1.490690e+15 -2.892199e+09
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## [6951,] -4.746604e+09 -3.946992e+09 -1.883946e+13 -9.711357e+07
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## [6961,] -3.665394e+11 -3.091684e+11 -1.493570e+15 -3.403894e+09
## [6962,] -2.473309e+11 -2.034794e+11 -1.131387e+15 -2.190171e+09
## [6963,] -4.407096e+09 -4.079891e+09 -1.886674e+13 -9.166763e+07
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## [6966,] -1.154582e+08 -1.022308e+08 -2.496568e+11 -1.539070e+07
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## [7024,] -1.105433e+06 -2.092850e+06 -9.420355e+10 -7.085931e+06
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## [7039,] -3.410298e+11 -2.887748e+11 -1.504394e+15 -3.167556e+09
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## [7070,] -2.294024e+11 -2.209346e+11 -2.205466e+13 -1.306199e+09
## [7071,] -4.106012e+09 -4.268550e+09 -3.677782e+11 -2.569058e+07
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## [7095,] -4.879636e+09 -4.216578e+09 -1.904002e+13 -9.518544e+07
## [7096,] -1.444564e+06 -1.304704e+06 -9.456640e+10 -7.254466e+06
## [7097,] -8.775896e+03 -8.610654e+03 -4.047779e+10 -8.292870e+06
## [7098,] -1.020097e+08 -1.049310e+08 -2.517068e+11 -1.571970e+07
## [7099,] -3.323727e+11 -2.690849e+11 -1.508011e+15 -2.493968e+09
## [7100,] -2.465095e+11 -1.890930e+11 -1.142326e+15 -1.895670e+09
## [7101,] -4.339901e+09 -4.216677e+09 -1.904916e+13 -1.074149e+08
## [7102,] -1.154229e+06 -1.863803e+06 -9.461180e+10 -7.222460e+06
## [7103,] -3.130878e+04 -1.909167e+05 -4.049722e+10 -8.184609e+06
## [7104,] -1.094062e+08 -9.772021e+07 -2.518277e+11 -1.547055e+07
## [7105,] -3.442987e+11 -2.988742e+11 -1.508011e+15 -3.272895e+09
## [7106,] -2.797819e+11 -1.890930e+11 -1.142326e+15 -3.121356e+09
## [7107,] -4.821534e+09 -4.081941e+09 -1.905831e+13 -9.562422e+07
## [7108,] -2.157547e+06 -1.301215e+06 -9.465722e+10 -7.420318e+06
## [7109,] -1.531399e+04 -5.831172e+04 -4.051666e+10 -8.296022e+06
## [7110,] -1.139748e+08 -9.538361e+07 -2.519486e+11 -1.584594e+07
## [7111,] -2.948111e+11 -3.196015e+11 -1.508735e+15 -3.770260e+09
## [7112,] -2.337879e+11 -2.416980e+11 -1.143972e+15 -2.584455e+09
## [7113,] -4.493225e+09 -3.949489e+09 -1.907660e+13 -8.881996e+07
## [7114,] -2.219220e+06 -1.473212e+06 -9.474808e+10 -7.355648e+06
## [7115,] -2.731851e+04 -3.791410e+04 -4.057501e+10 -8.454099e+06
## [7116,] -1.147918e+08 -9.542839e+07 -2.523114e+11 -1.559841e+07
## [7117,] -3.345219e+11 -2.988709e+11 -1.510908e+15 -3.042159e+09
## [7118,] -2.424955e+11 -2.034629e+11 -1.144520e+15 -1.945168e+09
## [7119,] -4.015636e+09 -4.778344e+09 -1.908575e+13 -1.010665e+08
## [7120,] -2.000417e+06 -1.295990e+06 -9.479353e+10 -7.371939e+06
## [7121,] -1.607970e+04 -1.534319e+05 -4.059446e+10 -8.254336e+06
## [7122,] -1.137847e+08 -9.544332e+07 -2.524324e+11 -1.470088e+07
## [7123,] -3.259519e+11 -2.887666e+11 -1.511632e+15 -3.219360e+09
## [7124,] -2.489281e+11 -2.337865e+11 -1.145069e+15 -2.350661e+09
## [7125,] -4.271724e+09 -4.634844e+09 -1.909490e+13 -9.982304e+07
## [7126,] -2.212396e+06 -1.467653e+06 -9.488446e+10 -7.469657e+06
## [7127,] -6.960286e+03 -2.406707e+05 -4.061393e+10 -8.208052e+06
## [7128,] -1.115148e+08 -1.001921e+08 -2.525534e+11 -1.542194e+07
## [7129,] -3.164437e+11 -3.410200e+11 -1.512357e+15 -2.849793e+09
## [7130,] -2.612168e+11 -2.108452e+11 -1.145618e+15 -2.195907e+09
## [7131,] -4.793036e+09 -3.949777e+09 -1.910406e+13 -9.366214e+07
## [7132,] -1.851305e+06 -1.653917e+06 -9.488446e+10 -7.263195e+06
```

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## [7133,] -1.386739e+04 -1.949442e+05 -4.061393e+10 -8.318046e+06
## [7134,] -1.143285e+08 -9.782599e+07 -2.526745e+11 -1.557871e+07
## [7135,] -3.291506e+11 -2.594972e+11 -1.513082e+15 -3.293643e+09
## [7136,] -2.538061e+11 -2.497359e+11 -1.146717e+15 -2.366196e+09
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## [7138,] -2.598240e+06 -9.710830e+05 -9.502093e+10 -7.291659e+06
## [7139,] -1.109599e+04 -1.969738e+05 -4.067234e+10 -8.288848e+06
## [7140,] -1.100677e+08 -1.075711e+08 -2.530378e+11 -1.592938e+07
## [7141,] -2.847698e+11 -2.887625e+11 -1.515258e+15 -3.401220e+09
## [7142,] -2.465019e+11 -2.416928e+11 -1.147816e+15 -2.583912e+09
## [7143,] -4.606905e+09 -3.819693e+09 -1.914070e+13 -1.073564e+08
## [7144,] -1.987468e+06 -2.270235e+06 -9.506645e+10 -7.267611e+06
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## [7146,] -1.172435e+08 -1.076028e+08 -2.532802e+11 -1.558998e+07
## [7147,] -3.302164e+11 -2.690754e+11 -1.516709e+15 -3.031214e+09
## [7148,] -2.670485e+11 -2.337813e+11 -1.148915e+15 -2.256712e+09
## [7149,] -4.258751e+09 -4.083015e+09 -1.915903e+13 -9.743467e+07
## [7150,] -1.585303e+06 -1.118777e+06 -9.515751e+10 -7.087982e+06
## [7151,] -2.478856e+04 -1.582582e+05 -4.075030e+10 -8.428497e+06
## [7152,] -1.121503e+08 -1.051659e+08 -2.535227e+11 -1.543236e+07
## [7153,] -3.334359e+11 -2.887592e+11 -1.518161e+15 -3.229163e+09
## [7154,] -2.637040e+11 -2.337798e+11 -1.150015e+15 -2.248867e+09
## [7155,] -4.925211e+09 -4.494352e+09 -1.917738e+13 -1.052611e+08
## [7156,] -2.063680e+06 -1.115547e+06 -9.524861e+10 -7.552218e+06
## [7157,] -4.712059e+04 -1.588668e+05 -4.076980e+10 -8.381726e+06
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## [7160,] -2.529840e+11 -2.337791e+11 -1.150565e+15 -2.119908e+09
## [7161,] -4.593225e+09 -3.950641e+09 -1.918655e+13 -8.528046e+07
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## [7187,] -2.786680e+04 -3.020304e+05 -4.086737e+10 -8.214375e+06
## [7188,] -1.067384e+08 -1.052600e+08 -2.542508e+11 -1.568565e+07
## [7189,] -3.475697e+11 -2.887543e+11 -1.522522e+15 -2.878575e+09
## [7190,] -2.529802e+11 -2.183504e+11 -1.153318e+15 -2.349550e+09
```

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## [7191,] -4.838099e+09 -3.442332e+09 -1.923246e+13 -9.185218e+07
## [7192,] -2.029225e+06 -2.029225e+06 -9.552218e+10 -7.548724e+06
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## [7208,] -2.244543e+11 -2.259942e+11 -1.155523e+15 -2.325723e+09
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## [7212,] -1.120587e+08 -1.053227e+08 -2.547369e+11 -1.554903e+07
## [7213,] -3.453718e+11 -2.887510e+11 -1.525432e+15 -3.196600e+09
## [7214,] -2.712473e+11 -1.961973e+11 -1.155523e+15 -2.286768e+09
## [7215,] -4.622578e+09 -4.219059e+09 -1.926922e+13 -9.699632e+07
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## [7218,] -1.048320e+08 -1.128200e+08 -2.547369e+11 -1.592881e+07
## [7219,] -2.907577e+11 -3.302059e+11 -1.525432e+15 -3.335072e+09
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## [7222,] -1.772073e+06 -9.471363e+05 -9.575046e+10 -7.504214e+06
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## [7225,] -3.497656e+11 -2.887494e+11 -1.526888e+15 -2.868092e+09
## [7226,] -2.175887e+11 -2.183461e+11 -1.156626e+15 -2.632374e+09
## [7227,] -4.397871e+09 -3.821205e+09 -1.928762e+13 -1.024615e+08
## [7228,] -2.145263e+06 -1.257997e+06 -9.579615e+10 -7.627398e+06
## [7229,] -5.617475e+03 -6.830121e+04 -4.102372e+10 -8.354051e+06
## [7230,] -1.123608e+08 -9.812854e+07 -2.551017e+11 -1.555767e+07
## [7231,] -3.366612e+11 -2.887486e+11 -1.527617e+15 -2.948425e+09
## [7232,] -2.578944e+11 -1.890751e+11 -1.157178e+15 -2.333332e+09
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## [7236,] -1.169736e+08 -1.029274e+08 -2.551017e+11 -1.550108e+07
## [7237,] -3.323490e+11 -2.988516e+11 -1.527617e+15 -3.324051e+09
## [7238,] -2.440786e+11 -2.259920e+11 -1.157178e+15 -2.224908e+09
## [7239,] -4.342720e+09 -3.951890e+09 -1.930602e+13 -1.056959e+08
## [7240,] -2.364593e+06 -1.254571e+06 -9.588755e+10 -7.488180e+06
## [7241,] -6.870118e+04 -2.689583e+04 -4.104329e+10 -8.347127e+06
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## [7246,] -1.967610e+06 -1.252860e+06 -9.593328e+10 -7.342060e+06
## [7247,] -8.023608e+04 -9.777723e+04 -4.108243e+10 -8.316300e+06
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```



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## [7269,] -4.370757e+09 -4.219854e+09 -1.934286e+13 -1.008654e+08
## [7270,] -1.876426e+06 -9.352750e+05 -9.611627e+10 -7.443849e+06
## [7271,] -2.816350e+04 -1.706511e+05 -4.114119e+10 -8.346526e+06
## [7272,] -1.101854e+08 -1.030204e+08 -2.558321e+11 -1.591684e+07
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## [7286,] -2.377034e+11 -2.578889e+11 -1.161044e+15 -2.163612e+09
## [7287,] -4.152334e+09 -4.496401e+09 -1.936129e+13 -1.021617e+08
## [7288,] -1.561838e+06 -1.599342e+06 -9.616204e+10 -7.366827e+06
## [7289,] -7.376622e+04 -9.969805e+04 -4.116078e+10 -8.328275e+06
## [7290,] -1.079519e+08 -1.079519e+08 -2.559540e+11 -1.609530e+07
## [7291,] -3.080870e+11 -3.301971e+11 -1.532720e+15 -3.039631e+09
## [7292,] -2.562438e+11 -2.183404e+11 -1.161044e+15 -2.178731e+09
## [7293,] -4.623617e+09 -4.220052e+09 -1.936129e+13 -9.367110e+07
## [7294,] -2.020005e+06 -1.416270e+06 -9.616204e+10 -7.578852e+06
## [7295,] -4.952571e+04 -1.712830e+05 -4.116078e+10 -8.444770e+06
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## [7297,] -3.519666e+11 -2.788135e+11 -1.532720e+15 -3.541825e+09
## [7298,] -2.377027e+11 -2.259862e+11 -1.161596e+15 -2.573733e+09
## [7299,] -4.510551e+09 -4.085262e+09 -1.937051e+13 -1.030253e+08
## [7300,] -1.327144e+06 -1.791493e+06 -9.620783e+10 -7.423715e+06
## [7301,] -6.570785e+03 -2.150034e+05 -4.118038e+10 -8.406487e+06
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## [7303,] -3.111970e+11 -3.091208e+11 -1.534180e+15 -3.778425e+09
## [7304,] -2.595370e+11 -2.259847e+11 -1.162702e+15 -2.340435e+09
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## [7310,] -2.788937e+11 -2.108227e+11 -1.163256e+15 -2.073726e+09
## [7311,] -5.120665e+09 -3.694017e+09 -1.939818e+13 -9.679482e+07
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## [7314,] -1.151251e+08 -1.007129e+08 -2.566856e+11 -1.575940e+07
## [7315,] -3.185149e+11 -2.988408e+11 -1.537102e+15 -3.248117e+09
## [7316,] -2.321945e+11 -2.259826e+11 -1.164362e+15 -2.451378e+09
## [7317,] -4.357736e+09 -4.357736e+09 -1.941663e+13 -1.009883e+08
## [7318,] -2.223867e+06 -1.405378e+06 -9.643692e+10 -7.505722e+06
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## [7320,] -1.102977e+08 -1.055738e+08 -2.566856e+11 -1.583550e+07
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## [7323,] -4.913423e+09 -4.085848e+09 -1.942586e+13 -9.540334e+07
## [7324,] -2.045105e+06 -1.230720e+06 -9.652863e+10 -7.666143e+06
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## [7475,] -6.383946e+04 -1.162578e+05 -4.180998e+10 -8.520215e+06
## [7476,] -1.094919e+08 -1.109996e+08 -2.601138e+11 -1.629478e+07
## [7477,] -3.301673e+11 -2.690310e+11 -1.557630e+15 -3.320440e+09
## [7478,] -2.251917e+11 -2.259622e+11 -1.179913e+15 -2.662461e+09
## [7479,] -4.458063e+09 -4.500091e+09 -1.969454e+13 -1.018717e+08
## [7480,] -2.090816e+06 -8.813889e+05 -9.781720e+10 -7.648347e+06
```

```
## [7481,] -8.131323e+04 -6.047173e+04 -4.188901e+10 -8.518012e+06
## [7482,] -1.130747e+08 -1.085402e+08 -2.604824e+11 -1.586214e+07
## [7483,] -3.205955e+11 -3.301646e+11 -1.559838e+15 -3.406656e+09
## [7484,] -2.368856e+11 -2.337377e+11 -1.181585e+15 -2.473178e+09
## [7485,] -4.655986e+09 -3.825457e+09 -1.970384e+13 -9.957611e+07
## [7486,] -2.131943e+06 -1.182044e+06 -9.786338e+10 -7.607253e+06
## [7487,] -1.178559e+04 -4.075101e+05 -4.188901e+10 -8.535202e+06
## [7488,] -1.135843e+08 -1.060611e+08 -2.604824e+11 -1.605334e+07
## [7489,] -3.355416e+11 -2.594474e+11 -1.559838e+15 -3.341691e+09
## [7490,] -2.329540e+11 -2.259600e+11 -1.181585e+15 -2.521823e+09
## [7491,] -4.347052e+09 -4.641714e+09 -1.970384e+13 -1.014649e+08
## [7492,] -2.022264e+06 -1.348000e+06 -9.790957e+10 -7.669190e+06
## [7493,] -7.091379e+04 -1.961607e+05 -4.190878e+10 -8.531068e+06
## [7494,] -1.151362e+08 -9.411024e+07 -2.606053e+11 -1.604029e+07
## [7495,] -3.237687e+11 -2.690279e+11 -1.560574e+15 -3.245331e+09
## [7496,] -2.456501e+11 -2.259593e+11 -1.182143e+15 -2.198784e+09
## [7497,] -4.570783e+09 -4.641818e+09 -1.971314e+13 -9.362539e+07
## [7498,] -1.793621e+06 -1.022344e+06 -9.795577e+10 -7.582791e+06
## [7499,] -4.541139e+04 -1.968381e+05 -4.192856e+10 -8.769298e+06
## [7500,] -1.136168e+08 -9.882617e+07 -2.607283e+11 -1.557064e+07
## [7501,] -3.312348e+11 -2.787821e+11 -1.561310e+15 -2.975031e+09
## [7502,] -2.464541e+11 -2.259586e+11 -1.182701e+15 -2.505403e+09
## [7503,] -4.500399e+09 -4.361066e+09 -1.972244e+13 -1.023410e+08
## [7504,] -1.771666e+06 -1.177065e+06 -9.800198e+10 -7.574679e+06
## [7505,] -9.429174e+04 -1.975168e+05 -4.194834e+10 -8.491324e+06
## [7506,] -1.149123e+08 -1.085880e+08 -2.608513e+11 -1.610052e+07
## [7507,] -3.431396e+11 -2.787813e+11 -1.562047e+15 -3.287769e+09
## [7508,] -2.360944e+11 -2.259579e+11 -1.183259e+15 -2.448806e+09
## [7509,] -4.814748e+09 -3.571173e+09 -1.973174e+13 -1.006693e+08
## [7510,] -1.831727e+06 -1.522967e+06 -9.800198e+10 -7.599330e+06
## [7511,] -6.657095e+04 -2.435281e+05 -4.194834e+10 -8.611830e+06
## [7512,] -1.138884e+08 -9.884136e+07 -2.608513e+11 -1.513589e+07
## [7513,] -3.111646e+11 -2.988124e+11 -1.562047e+15 -3.330660e+09
## [7514,] -2.480668e+11 -2.578579e+11 -1.183259e+15 -2.221521e+09
## [7515,] -4.292322e+09 -4.089072e+09 -1.973174e+13 -9.754350e+07
## [7516,] -1.633461e+06 -1.710606e+06 -9.804820e+10 -7.661235e+06
## [7517,] -8.026205e+04 -1.036488e+04 -4.196812e+10 -8.544465e+06
## [7518,] -1.154424e+08 -1.061241e+08 -2.609743e+11 -1.593422e+07
## [7519,] -3.398709e+11 -2.887091e+11 -1.562784e+15 -3.150208e+09
## [7520,] -2.480660e+11 -2.259571e+11 -1.183817e+15 -2.400799e+09
## [7521,] -4.627879e+09 -4.361268e+09 -1.974105e+13 -9.942828e+07
## [7522,] -1.730170e+06 -1.342682e+06 -9.804820e+10 -7.582993e+06
## [7523,] -3.250432e+04 -2.442829e+05 -4.196812e+10 -8.564552e+06
## [7524,] -1.083546e+08 -1.061241e+08 -2.609743e+11 -1.616433e+07
## [7525,] -2.998313e+11 -2.988115e+11 -1.562784e+15 -3.341338e+09
## [7526,] -2.244174e+11 -2.183111e+11 -1.183817e+15 -2.546015e+09
## [7527,] -4.585257e+09 -4.224124e+09 -1.974105e+13 -9.963712e+07
## [7528,] -1.809539e+06 -1.521082e+06 -9.804820e+10 -7.640606e+06
## [7529,] -3.996450e+04 -1.981965e+05 -4.196812e+10 -8.564552e+06
## [7530,] -1.083546e+08 -1.061241e+08 -2.609743e+11 -1.620284e+07
## [7531,] -3.486199e+11 -2.988115e+11 -1.562784e+15 -3.160679e+09
## [7532,] -2.368819e+11 -2.496840e+11 -1.184375e+15 -2.175736e+09
## [7533,] -4.528836e+09 -4.224223e+09 -1.975036e+13 -9.757369e+07
## [7534,] -1.909142e+06 -8.728012e+05 -9.809444e+10 -7.877528e+06
## [7535,] -7.521771e+04 -2.450388e+05 -4.198791e+10 -8.537461e+06
## [7536,] -1.172660e+08 -1.012658e+08 -2.610974e+11 -1.584492e+07
## [7537,] -3.376992e+11 -2.500352e+11 -1.564258e+15 -2.460280e+09
## [7538,] -2.562106e+11 -1.961614e+11 -1.184933e+15 -2.376861e+09
```

```
## [7539,] -4.251576e+09 -4.786059e+09 -1.975967e+13 -1.045321e+08
## [7540,] -2.228519e+06 -1.016173e+06 -9.814068e+10 -7.669698e+06
## [7541,] -2.630764e+04 -1.995596e+05 -4.200771e+10 -8.590746e+06
## [7542,] -1.183216e+08 -9.888695e+07 -2.612205e+11 -1.619588e+07
## [7543,] -3.442297e+11 -2.887075e+11 -1.564258e+15 -3.139583e+09
## [7544,] -2.160402e+11 -2.661580e+11 -1.186050e+15 -2.611612e+09
## [7545,] -4.585671e+09 -3.826213e+09 -1.977830e+13 -8.794397e+07
## [7546,] -1.587844e+06 -1.335608e+06 -9.823320e+10 -7.711266e+06
## [7547,] -1.824046e+04 -2.016130e+05 -4.206712e+10 -8.676290e+06
## [7548,] -1.168143e+08 -1.013273e+08 -2.615899e+11 -1.596474e+07
## [7549,] -3.301558e+11 -2.887042e+11 -1.567208e+15 -3.212773e+09
## [7550,] -2.537491e+11 -2.337296e+11 -1.187727e+15 -2.321450e+09
## [7551,] -4.501321e+09 -4.089854e+09 -1.980625e+13 -9.953498e+07
## [7552,] -1.896493e+06 -1.163837e+06 -9.837206e+10 -7.682604e+06
## [7553,] -3.091525e+04 -3.010234e+05 -4.210675e+10 -8.653517e+06
## [7554,] -1.155574e+08 -9.896295e+07 -2.618364e+11 -1.649771e+07
## [7555,] -3.398646e+11 -2.787748e+11 -1.567946e+15 -3.593110e+09
## [7556,] -2.611575e+11 -1.961580e+11 -1.187727e+15 -2.305843e+09
## [7557,] -4.714554e+09 -4.089952e+09 -1.981558e+13 -1.041981e+08
## [7558,] -1.833300e+06 -1.506040e+06 -9.841837e+10 -7.550975e+06
## [7559,] -1.386019e+04 -4.244588e+04 -4.212657e+10 -8.634933e+06
## [7560,] -1.148032e+08 -1.037975e+08 -2.619596e+11 -1.632937e+07
## [7561,] -3.290839e+11 -2.690192e+11 -1.568684e+15 -3.449235e+09
## [7562,] -2.376669e+11 -2.107911e+11 -1.188286e+15 -2.344885e+09
## [7563,] -4.728938e+09 -4.501424e+09 -1.981558e+13 -1.059145e+08
## [7564,] -1.910747e+06 -1.325032e+06 -9.851102e+10 -7.786617e+06
## [7565,] -1.552089e+05 -1.258264e+05 -4.216623e+10 -8.551855e+06
## [7566,] -1.174150e+08 -9.430307e+07 -2.622062e+11 -1.609115e+07
## [7567,] -3.301523e+11 -2.690176e+11 -1.570160e+15 -2.515453e+09
## [7568,] -2.644819e+11 -2.416364e+11 -1.189405e+15 -2.114985e+09
## [7569,] -4.714764e+09 -4.643171e+09 -1.983423e+13 -9.999894e+07
## [7570,] -1.931421e+06 -8.599986e+05 -9.851102e+10 -7.937178e+06
## [7571,] -1.161223e+05 -1.636535e+05 -4.218606e+10 -8.639757e+06
## [7572,] -1.105335e+08 -1.038442e+08 -2.623296e+11 -1.600140e+07
## [7573,] -3.333724e+11 -2.690168e+11 -1.570899e+15 -3.254737e+09
## [7574,] -2.321606e+11 -2.416357e+11 -1.189964e+15 -2.197781e+09
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## [7576,] -2.096389e+06 -1.000825e+06 -9.860372e+10 -7.786821e+06
## [7577,] -9.483688e+04 -2.542010e+05 -4.222575e+10 -8.657402e+06
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## [7579,] -3.080412e+11 -3.195263e+11 -1.572377e+15 -3.201611e+09
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## [7581,] -4.572436e+09 -4.090440e+09 -1.986223e+13 -9.858454e+07
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## [7585,] -3.070067e+11 -2.886976e+11 -1.573116e+15 -3.096925e+09
## [7586,] -2.545616e+11 -2.337244e+11 -1.191644e+15 -2.594278e+09
## [7587,] -5.111267e+09 -3.827159e+09 -1.987157e+13 -9.694387e+07
## [7588,] -1.902306e+06 -1.152325e+06 -9.869645e+10 -7.791189e+06
## [7589,] -1.496056e+04 -9.530810e+04 -4.224560e+10 -8.644582e+06
## [7590,] -1.182607e+08 -1.190428e+08 -2.626998e+11 -1.584779e+07
## [7591,] -3.630613e+11 -3.301488e+11 -1.573116e+15 -2.862938e+09
## [7592,] -2.771418e+11 -2.107869e+11 -1.191644e+15 -2.313125e+09
## [7593,] -4.729569e+09 -3.827159e+09 -1.987157e+13 -9.859972e+07
## [7594,] -2.889777e+06 -9.977698e+05 -9.869645e+10 -7.778704e+06
## [7595,] -4.858477e+04 -1.280041e+05 -4.224560e+10 -8.624401e+06
## [7596,] -1.180172e+08 -1.039065e+08 -2.628233e+11 -1.586340e+07
```

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## [7597,] -3.333688e+11 -2.787683e+11 -1.573855e+15 -2.953320e+09
## [7598,] -2.221069e+11 -2.416327e+11 -1.192204e+15 -2.553049e+09
## [7599,] -4.198443e+09 -4.502142e+09 -1.988091e+13 -1.038802e+08
## [7600,] -1.839015e+06 -8.529269e+05 -9.874284e+10 -7.691688e+06
## [7601,] -1.786270e+04 -1.667593e+05 -4.228531e+10 -8.728777e+06
## [7602,] -1.182940e+08 -1.014966e+08 -2.629467e+11 -1.587903e+07
## [7603,] -3.431244e+11 -2.886960e+11 -1.574595e+15 -2.933013e+09
## [7604,] -2.448324e+11 -1.932884e+11 -1.192764e+15 -2.250980e+09
## [7605,] -4.488210e+09 -4.225713e+09 -1.989025e+13 -9.594602e+07
## [7606,] -1.857215e+06 -7.194375e+05 -9.878924e+10 -7.967242e+06
## [7607,] -5.601001e+04 -6.822135e+04 -4.228531e+10 -8.656458e+06
## [7608,] -1.098760e+08 -9.674670e+07 -2.630703e+11 -1.584698e+07
## [7609,] -3.312181e+11 -2.690120e+11 -1.575335e+15 -3.437490e+09
## [7610,] -2.537414e+11 -2.107848e+11 -1.193324e+15 -2.694147e+09
## [7611,] -4.474299e+09 -4.502347e+09 -1.989959e+13 -9.534681e+07
## [7612,] -1.916582e+06 -1.312746e+06 -9.883564e+10 -7.791496e+06
## [7613,] -4.326206e+04 -1.296497e+05 -4.230518e+10 -8.704321e+06
## [7614,] -1.108979e+08 -1.114025e+08 -2.631938e+11 -1.621724e+07
## [7615,] -3.008378e+11 -2.987965e+11 -1.576074e+15 -3.307510e+09
## [7616,] -2.321554e+11 -2.107841e+11 -1.193885e+15 -2.455402e+09
## [7617,] -4.037550e+09 -4.644005e+09 -1.990894e+13 -1.024385e+08
## [7618,] -1.772724e+06 -8.486979e+05 -9.888206e+10 -7.733418e+06
## [7619,] -1.337649e+05 -2.580683e+05 -4.232504e+10 -8.607785e+06
## [7620,] -1.134325e+08 -1.015274e+08 -2.631938e+11 -1.618834e+07
## [7621,] -3.420316e+11 -2.500230e+11 -1.576074e+15 -3.148664e+09
## [7622,] -2.432280e+11 -2.107841e+11 -1.193885e+15 -2.383583e+09
## [7623,] -4.601308e+09 -3.827537e+09 -1.990894e+13 -1.005406e+08
## [7624,] -1.976882e+06 -7.168473e+05 -9.888206e+10 -7.812430e+06
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## [7627,] -3.258725e+11 -2.787635e+11 -1.578295e+15 -2.724452e+09
## [7628,] -2.737304e+11 -2.182961e+11 -1.195567e+15 -2.189467e+09
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## [7636,] -2.008206e+06 -5.902358e+05 -9.911432e+10 -7.800440e+06
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## [7638,] -1.100042e+08 -1.065181e+08 -2.640595e+11 -1.636668e+07
## [7639,] -3.153153e+11 -2.987907e+11 -1.581258e+15 -3.425855e+09
## [7640,] -2.521034e+11 -2.033967e+11 -1.197811e+15 -2.181596e+09
## [7641,] -4.963999e+09 -4.226706e+09 -1.998378e+13 -9.243765e+07
## [7642,] -1.980666e+06 -1.132722e+06 -9.925380e+10 -7.964068e+06
## [7643,] -4.205010e+04 -2.162809e+05 -4.248416e+10 -8.678343e+06
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## [7645,] -3.574563e+11 -3.090656e+11 -1.582000e+15 -2.802438e+09
## [7646,] -2.529179e+11 -2.182926e+11 -1.198373e+15 -2.718751e+09
## [7647,] -4.687735e+09 -3.828293e+09 -1.998378e+13 -1.015051e+08
## [7648,] -1.488760e+06 -1.295294e+06 -9.930031e+10 -7.734336e+06
## [7649,] -5.534651e+04 -1.352108e+05 -4.250407e+10 -8.766891e+06
## [7650,] -1.138342e+08 -9.926725e+07 -2.643071e+11 -1.600348e+07
## [7651,] -3.226829e+11 -2.987890e+11 -1.582741e+15 -2.922018e+09
## [7652,] -2.408268e+11 -2.259375e+11 -1.198934e+15 -2.196635e+09
## [7653,] -4.730935e+09 -3.959003e+09 -1.999315e+13 -9.386663e+07
## [7654,] -2.193885e+06 -1.131097e+06 -9.930031e+10 -7.888582e+06
```

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## [7657,] -3.387610e+11 -2.690041e+11 -1.582741e+15 -3.179345e+09
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## [7660,] -1.978516e+06 -1.131097e+06 -9.930031e+10 -7.614505e+06
## [7661,] -9.891787e+04 -1.020277e+05 -4.252399e+10 -8.672896e+06
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## [7665,] -4.745449e+09 -4.091907e+09 -2.000252e+13 -1.057983e+08
## [7666,] -2.125878e+06 -9.765123e+05 -9.934684e+10 -7.763503e+06
## [7667,] -2.204901e+04 -1.025164e+05 -4.254391e+10 -8.697640e+06
## [7668,] -1.123397e+08 -9.929771e+07 -2.645548e+11 -1.591053e+07
## [7669,] -3.080276e+11 -2.787571e+11 -1.584224e+15 -3.613469e+09
## [7670,] -2.488511e+11 -2.259346e+11 -1.201182e+15 -2.511002e+09
## [7671,] -4.702602e+09 -3.700336e+09 -2.003063e+13 -1.034897e+08
## [7672,] -1.409585e+06 -1.124604e+06 -9.948649e+10 -7.738893e+06
## [7673,] -1.762519e+05 -1.762519e+05 -4.258376e+10 -8.663285e+06
## [7674,] -1.133892e+08 -1.066127e+08 -2.648026e+11 -1.643289e+07
## [7675,] -2.728819e+11 -3.301339e+11 -1.585708e+15 -3.806274e+09
## [7676,] -2.448210e+11 -1.961418e+11 -1.201182e+15 -2.454417e+09
## [7677,] -4.832789e+09 -4.227303e+09 -2.004001e+13 -1.056459e+08
## [7678,] -1.320673e+06 -1.967782e+06 -9.953306e+10 -8.006840e+06
## [7679,] -9.375492e+03 -2.690518e+05 -4.260369e+10 -8.780806e+06
## [7680,] -1.123883e+08 -1.091142e+08 -2.649266e+11 -1.667280e+07
## [7681,] -3.279945e+11 -2.787546e+11 -1.586451e+15 -3.231679e+09
## [7682,] -2.529133e+11 -2.182883e+11 -1.201745e+15 -2.446311e+09
## [7683,] -4.688363e+09 -4.092298e+09 -2.004001e+13 -9.659672e+07
## [7684,] -2.052367e+06 -1.286612e+06 -9.953306e+10 -7.763912e+06
## [7685,] -1.039896e+05 -7.475738e+04 -4.260369e+10 -8.725652e+06
## [7686,] -1.159685e+08 -1.091142e+08 -2.649266e+11 -1.657522e+07
## [7687,] -3.163560e+11 -2.787538e+11 -1.587193e+15 -2.421105e+09
## [7688,] -2.512834e+11 -1.961404e+11 -1.202307e+15 -2.543471e+09
## [7689,] -4.746081e+09 -3.574370e+09 -2.005877e+13 -9.973792e+07
## [7690,] -1.183773e+06 -1.643320e+06 -9.962623e+10 -7.814071e+06
## [7691,] -3.127094e+04 -1.781819e+05 -4.264358e+10 -8.685457e+06
## [7692,] -1.144599e+08 -1.042027e+08 -2.651746e+11 -1.645148e+07
## [7693,] -3.142618e+11 -3.090588e+11 -1.587936e+15 -3.403267e+09
## [7694,] -2.504700e+11 -1.961397e+11 -1.202870e+15 -2.617563e+09
## [7695,] -4.659950e+09 -3.829050e+09 -2.005877e+13 -1.022623e+08
## [7696,] -2.473643e+06 -8.263207e+05 -9.962623e+10 -7.851642e+06
## [7697,] -1.391782e+04 -1.781819e+05 -4.264358e+10 -8.743385e+06
## [7698,] -1.196382e+08 -1.091461e+08 -2.651746e+11 -1.608467e+07
## [7699,] -3.732212e+11 -2.886812e+11 -1.587936e+15 -2.931523e+09
## [7700,] -2.935901e+11 -2.337096e+11 -1.202870e+15 -2.105848e+09
## [7701,] -5.218770e+09 -4.364700e+09 -2.005877e+13 -9.765834e+07
## [7702,] -1.901294e+06 -6.962937e+05 -9.962623e+10 -7.793237e+06
## [7703,] -4.286249e+04 -1.788276e+05 -4.266352e+10 -8.672617e+06
## [7704,] -1.246807e+08 -1.042183e+08 -2.652986e+11 -1.668175e+07
## [7705,] -2.827026e+11 -3.630420e+11 -1.588679e+15 -3.033231e+09
## [7706,] -2.496580e+11 -2.107722e+11 -1.203432e+15 -2.526980e+09
## [7707,] -4.490155e+09 -4.092591e+09 -2.006815e+13 -1.031263e+08
## [7708,] -2.024525e+06 -1.118131e+06 -9.967284e+10 -7.760063e+06
## [7709,] -1.672153e+04 -1.794745e+05 -4.268348e+10 -8.842640e+06
## [7710,] -1.139810e+08 -9.468933e+07 -2.654227e+11 -1.628955e+07
## [7711,] -3.333856e+11 -2.528438e+11 -2.911486e+13 -1.653123e+09
## [7712,] -2.565823e+11 -1.986500e+11 -2.205466e+13 -1.253962e+09
```



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## [7713,] -3.894203e+09 -3.739026e+09 -3.677782e+11 -2.654638e+07
## [7714,] -1.698969e+07 -1.339164e+07 -1.826650e+09 -1.206323e+04
## [7715,] -6.730058e+06 -5.540624e+06 -7.818714e+08 -5.067983e+04
## [7716,] -6.087965e+07 -4.934676e+07 -4.878794e+09 -9.380468e+05
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## [7718,] -2.444029e+11 -2.059459e+11 -2.213090e+13 -1.259659e+09
## [7719,] -3.933586e+09 -3.739120e+09 -3.690497e+11 -2.361983e+07
## [7720,] -1.766629e+07 -1.393734e+07 -1.832966e+09 -1.889003e+04
## [7721,] -6.474042e+06 -5.537027e+06 -7.845745e+08 -5.788958e+04
## [7722,] -5.829340e+07 -5.811082e+07 -4.878794e+09 -8.832407e+05
## [7723,] -3.344618e+11 -2.719361e+11 -2.921551e+13 -1.447670e+09
## [7724,] -2.396143e+11 -2.209339e+11 -2.213090e+13 -1.125258e+09
## [7725,] -4.241341e+09 -3.364977e+09 -3.690497e+11 -2.271309e+07
## [7726,] -1.741641e+07 -1.507330e+07 -1.832966e+09 -1.868561e+04
## [7727,] -6.751564e+06 -5.084906e+06 -7.845745e+08 -5.812587e+04
## [7728,] -6.106653e+07 -4.934676e+07 -4.878794e+09 -9.921173e+05
## [7729,] -3.049589e+11 -2.917241e+11 -2.921551e+13 -1.683514e+09
## [7730,] -2.607061e+11 -2.059452e+11 -2.220728e+13 -1.152582e+09
## [7731,] -4.268750e+09 -3.868311e+09 -3.703234e+11 -2.413874e+07
## [7732,] -1.784842e+07 -1.393164e+07 -1.839292e+09 -1.538517e+04
## [7733,] -6.875628e+06 -5.081460e+06 -7.872823e+08 -5.453054e+04
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## [7738,] -1.387602e+07 -1.747232e+07 -1.839292e+09 -1.018522e+04
## [7739,] -6.296633e+06 -6.247489e+06 -7.872823e+08 -4.659462e+04
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## [7742,] -2.220918e+11 -2.416169e+11 -1.203995e+15 -2.617407e+09
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## [7747,] -3.507910e+11 -2.594155e+11 -1.590165e+15 -2.871036e+09
## [7748,] -2.313604e+11 -1.961377e+11 -1.204558e+15 -2.311435e+09
## [7749,] -4.660263e+09 -3.829334e+09 -2.008693e+13 -8.071953e+07
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## [7754,] -2.456183e+11 -2.033871e+11 -1.205684e+15 -1.756528e+09
## [7755,] -4.994944e+09 -3.829523e+09 -2.010571e+13 -9.794092e+07
## [7756,] -1.257723e+06 -2.725798e+06 -9.985936e+10 -7.677589e+06
## [7757,] -2.918820e+04 -1.420384e+05 -4.274336e+10 -8.736969e+06
## [7758,] -1.150709e+08 -1.067548e+08 -2.659193e+11 -1.654706e+07
## [7759,] -3.355026e+11 -2.987781e+11 -1.592395e+15 -3.188742e+09
## [7760,] -2.464215e+11 -2.107680e+11 -1.206811e+15 -2.461703e+09
## [7761,] -4.617907e+09 -3.829712e+09 -2.012450e+13 -1.034323e+08
## [7762,] -1.785525e+06 -1.108456e+06 -9.995268e+10 -7.731616e+06
## [7763,] -3.686219e+04 -1.431926e+05 -4.278331e+10 -8.754713e+06
## [7764,] -1.107640e+08 -9.948054e+07 -2.660435e+11 -1.643663e+07
## [7765,] -3.311970e+11 -2.886755e+11 -1.593139e+15 -3.424424e+09
## [7766,] -2.376416e+11 -2.259266e+11 -1.207375e+15 -2.518294e+09
## [7767,] -4.848416e+09 -3.575101e+09 -2.013390e+13 -9.267290e+07
## [7768,] -2.160062e+06 -1.442948e+06 -9.999936e+10 -7.974146e+06
## [7769,] -2.997669e+04 -1.833801e+05 -4.280329e+10 -8.855324e+06
## [7770,] -1.151037e+08 -1.043275e+08 -2.661677e+11 -1.587524e+07
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## [7776,] -1.163912e+08 -1.018973e+08 -2.661677e+11 -1.628792e+07
## [7777,] -3.420102e+11 -2.987765e+11 -1.593883e+15 -3.209655e+09
## [7778,] -2.553591e+11 -1.961343e+11 -1.207375e+15 -2.429536e+09
## [7779,] -4.718123e+09 -3.575101e+09 -2.013390e+13 -1.002789e+08
## [7780,] -1.106847e+06 -1.106847e+06 -9.999936e+10 -7.636619e+06
## [7781,] -6.580821e+04 -2.770373e+05 -4.280329e+10 -8.802847e+06
## [7782,] -1.115371e+08 -1.067864e+08 -2.661677e+11 -1.642343e+07
## [7783,] -3.069830e+11 -2.987765e+11 -1.593883e+15 -3.326869e+09
## [7784,] -2.480341e+11 -1.961343e+11 -1.207375e+15 -2.453585e+09
## [7785,] -4.365508e+09 -4.365508e+09 -2.013390e+13 -1.030224e+08
## [7786,] -1.841669e+06 -8.138649e+05 -1.000461e+11 -8.109605e+06
## [7787,] -6.874926e+04 -1.813330e+04 -4.282327e+10 -8.795739e+06
## [7788,] -1.060772e+08 -1.169412e+08 -2.664163e+11 -1.653299e+07
## [7789,] -3.398317e+11 -2.689906e+11 -1.595372e+15 -2.860485e+09
## [7790,] -2.464185e+11 -2.496504e+11 -1.209066e+15 -2.287510e+09
## [7791,] -4.352092e+09 -3.960830e+09 -2.017151e+13 -9.639564e+07
## [7792,] -2.148846e+06 -5.623932e+05 -1.002329e+11 -8.135530e+06
## [7793,] -2.034081e+04 -2.314637e+05 -4.290326e+10 -8.883926e+06
## [7794,] -1.146726e+08 -1.093538e+08 -2.667894e+11 -1.606838e+07
## [7795,] -3.301190e+11 -2.787417e+11 -1.598351e+15 -3.251512e+09
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## [7798,] -1.996355e+06 -9.465414e+05 -1.002797e+11 -7.857261e+06
## [7799,] -4.922688e+04 -5.597384e+04 -4.292327e+10 -8.786395e+06
## [7800,] -1.162319e+08 -9.958727e+07 -2.669138e+11 -1.660658e+07
## [7801,] -3.376575e+11 -2.787409e+11 -1.599096e+15 -3.198499e+09
## [7802,] -2.569960e+11 -2.259215e+11 -1.211324e+15 -2.349709e+09
## [7803,] -4.718858e+09 -4.228992e+09 -2.019975e+13 -9.892326e+07
## [7804,] -1.729768e+06 -1.614065e+06 -1.003264e+11 -7.823951e+06
## [7805,] -6.108962e+04 -1.478564e+05 -4.294328e+10 -8.869646e+06
## [7806,] -1.121564e+08 -1.144491e+08 -2.670383e+11 -1.694612e+07
## [7807,] -3.452811e+11 -2.886681e+11 -1.599841e+15 -3.135474e+09
## [7808,] -2.619536e+11 -2.182754e+11 -1.211888e+15 -2.412968e+09
## [7809,] -4.647442e+09 -3.702195e+09 -2.021858e+13 -9.300712e+07
## [7810,] -1.785035e+06 -9.420861e+05 -1.004200e+11 -8.332836e+06
## [7811,] -9.459231e+04 -1.893174e+05 -4.298332e+10 -8.829121e+06
## [7812,] -1.183718e+08 -1.020517e+08 -2.674118e+11 -1.665103e+07
## [7813,] -3.333362e+11 -2.987681e+11 -1.601333e+15 -3.478188e+09
## [7814,] -2.512681e+11 -2.107596e+11 -1.213583e+15 -2.325881e+09
## [7815,] -4.284018e+09 -3.702381e+09 -2.023742e+13 -1.036189e+08
## [7816,] -1.702221e+06 -2.006647e+06 -1.005136e+11 -7.899643e+06
## [7817,] -1.993139e+05 -1.906497e+05 -4.302338e+10 -8.748013e+06
## [7818,] -1.183884e+08 -1.069602e+08 -2.675364e+11 -1.633649e+07
## [7819,] -3.563181e+11 -2.787377e+11 -1.602079e+15 -3.093608e+09
## [7820,] -2.586404e+11 -2.033774e+11 -1.213583e+15 -2.373063e+09
## [7821,] -5.266342e+09 -4.094351e+09 -2.023742e+13 -9.650070e+07
## [7822,] -2.070535e+06 -1.422825e+06 -1.005136e+11 -7.912225e+06
## [7823,] -1.048489e+05 -1.906497e+05 -4.302338e+10 -8.785779e+06
## [7824,] -1.114619e+08 -1.094497e+08 -2.675364e+11 -1.643336e+07
## [7825,] -3.142446e+11 -3.090418e+11 -1.602825e+15 -2.970365e+09
## [7826,] -2.456070e+11 -2.416034e+11 -1.214148e+15 -2.194701e+09
## [7827,] -4.436259e+09 -3.961696e+09 -2.025628e+13 -1.021635e+08
## [7828,] -1.877682e+06 -1.086044e+06 -1.006072e+11 -7.983919e+06
```

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## [7830,] -1.181780e+08 -9.970932e+07 -2.679102e+11 -1.613317e+07
## [7831,] -3.279735e+11 -2.689811e+11 -1.604318e+15 -3.208443e+09
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## [7836,] -1.133027e+08 -1.021289e+08 -2.680349e+11 -1.650673e+07
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## [7840,] -1.688292e+06 -1.786587e+06 -1.008415e+11 -7.891982e+06
## [7841,] -5.148320e+04 -2.925315e+05 -4.318381e+10 -8.769678e+06
## [7842,] -1.167046e+08 -1.021907e+08 -2.685339e+11 -1.616388e+07
## [7843,] -3.059350e+11 -2.886590e+11 -1.608052e+15 -3.314454e+09
## [7844,] -2.282321e+11 -2.107539e+11 -1.218108e+15 -2.682249e+09
## [7845,] -4.521026e+09 -3.962369e+09 -2.032233e+13 -8.976609e+07
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## [7849,] -3.163310e+11 -2.787304e+11 -1.608800e+15 -3.000250e+09
## [7850,] -2.602862e+11 -2.107532e+11 -1.218674e+15 -2.148769e+09
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## [7855,] -3.463664e+11 -2.787304e+11 -1.608800e+15 -2.919127e+09
## [7856,] -2.290070e+11 -2.496374e+11 -1.218674e+15 -2.239961e+09
## [7857,] -4.749030e+09 -4.095231e+09 -2.032233e+13 -9.458905e+07
## [7858,] -1.903993e+06 -1.074924e+06 -1.009352e+11 -8.009954e+06
## [7859,] -2.875124e+04 -2.433773e+05 -4.322396e+10 -8.869082e+06
## [7860,] -1.159797e+08 -1.046712e+08 -2.689085e+11 -1.640450e+07
## [7861,] -3.333256e+11 -2.787288e+11 -1.610295e+15 -3.134277e+09
## [7862,] -2.472093e+11 -2.107511e+11 -1.220374e+15 -2.516531e+09
## [7863,] -4.691817e+09 -4.095525e+09 -2.035067e+13 -1.048747e+08
## [7864,] -1.736850e+06 -1.401033e+06 -1.010760e+11 -7.867374e+06
## [7865,] -5.986446e+04 -8.918211e+04 -4.326413e+10 -8.875264e+06
## [7866,] -1.098924e+08 -1.096416e+08 -2.690334e+11 -1.694826e+07
## [7867,] -3.354796e+11 -2.987564e+11 -1.611792e+15 -3.082147e+09
## [7868,] -2.480158e+11 -2.182640e+11 -1.220941e+15 -2.340595e+09
## [7869,] -4.176395e+09 -4.095622e+09 -2.036012e+13 -1.053196e+08
## [7870,] -1.997478e+06 -7.811119e+05 -1.011699e+11 -8.035823e+06
## [7871,] -2.812761e+04 -1.219535e+05 -4.330432e+10 -8.984083e+06
## [7872,] -1.188821e+08 -1.071816e+08 -2.692833e+11 -1.614302e+07
## [7873,] -3.463619e+11 -2.987556e+11 -1.612540e+15 -2.868580e+09
## [7874,] -2.569820e+11 -2.182633e+11 -1.221507e+15 -2.103534e+09
## [7875,] -4.663393e+09 -4.230781e+09 -2.036957e+13 -9.344533e+07
## [7876,] -2.147771e+06 -6.548462e+05 -1.011699e+11 -8.056978e+06
## [7877,] -5.358471e+04 -2.001062e+05 -4.330432e+10 -8.945892e+06
## [7878,] -1.094231e+08 -1.121943e+08 -2.692833e+11 -1.625861e+07
## [7879,] -3.247692e+11 -3.090308e+11 -1.612540e+15 -2.928793e+09
## [7880,] -2.545207e+11 -2.107497e+11 -1.221507e+15 -2.224270e+09
## [7881,] -4.836508e+09 -3.577386e+09 -2.036957e+13 -9.547980e+07
## [7882,] -2.607215e+06 -1.579305e+06 -1.011699e+11 -8.099372e+06
## [7883,] -5.358471e+04 -4.141711e+05 -4.330432e+10 -8.925362e+06
## [7884,] -1.178572e+08 -1.022988e+08 -2.694083e+11 -1.652642e+07
## [7885,] -3.343991e+11 -3.090299e+11 -1.613289e+15 -3.576368e+09
## [7886,] -2.392058e+11 -2.259070e+11 -1.222642e+15 -1.775053e+09
```

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## [7887,] -4.635055e+09 -4.230980e+09 -2.038848e+13 -9.964497e+07
## [7888,] -1.519800e+06 -1.223272e+06 -1.012638e+11 -7.943276e+06
## [7889,] -1.709906e+04 -4.171270e+05 -4.336464e+10 -8.903898e+06
## [7890,] -1.153062e+08 -1.072290e+08 -2.696584e+11 -1.644167e+07
## [7891,] -3.376388e+11 -2.787240e+11 -1.614786e+15 -3.520668e+09
## [7892,] -2.384122e+11 -2.415913e+11 -1.223209e+15 -2.356022e+09
## [7893,] -4.836827e+09 -3.703962e+09 -2.039794e+13 -9.675609e+07
## [7894,] -1.499595e+06 -1.392003e+06 -1.013108e+11 -7.801089e+06
## [7895,] -2.156133e+05 -1.235599e+05 -4.336464e+10 -8.763922e+06
## [7896,] -1.107267e+08 -1.122429e+08 -2.696584e+11 -1.681250e+07
## [7897,] -3.663867e+11 -2.886517e+11 -1.614786e+15 -3.020033e+09
## [7898,] -2.753914e+11 -2.107476e+11 -1.223209e+15 -2.262473e+09
## [7899,] -4.635159e+09 -4.507783e+09 -2.039794e+13 -9.903430e+07
## [7900,] -2.341992e+06 -1.392003e+06 -1.013108e+11 -8.015006e+06
## [7901,] -3.104768e+03 -2.021623e+05 -4.336464e+10 -9.009607e+06
## [7902,] -1.207661e+08 -1.147927e+08 -2.696584e+11 -1.627710e+07
## [7903,] -3.237052e+11 -2.689700e+11 -1.614786e+15 -3.238978e+09
## [7904,] -2.480120e+11 -2.336823e+11 -1.223776e+15 -2.193484e+09
## [7905,] -4.807860e+09 -3.963235e+09 -2.040741e+13 -9.821794e+07
## [7906,] -1.804034e+06 -7.757184e+05 -1.013578e+11 -7.905692e+06
## [7907,] -1.538872e+05 -2.502101e+05 -4.340487e+10 -8.807881e+06
## [7908,] -1.148255e+08 -1.023607e+08 -2.699086e+11 -1.607763e+07
## [7909,] -3.163224e+11 -2.787224e+11 -1.616284e+15 -2.958718e+09
## [7910,] -2.392035e+11 -2.415898e+11 -1.224344e+15 -2.524138e+09
## [7911,] -4.424055e+09 -4.793463e+09 -2.041687e+13 -1.056287e+08
## [7912,] -1.963582e+06 -9.097348e+05 -1.014518e+11 -7.952099e+06
## [7913,] -5.119235e+04 -2.042290e+05 -4.342500e+10 -8.985100e+06
## [7914,] -1.163859e+08 -1.122915e+08 -2.700338e+11 -1.617988e+07
## [7915,] -3.408933e+11 -2.689676e+11 -1.617034e+15 -2.878080e+09
## [7916,] -2.376185e+11 -2.033636e+11 -1.224912e+15 -2.715007e+09
## [7917,] -4.299734e+09 -4.368639e+09 -2.042634e+13 -9.333166e+07
## [7918,] -1.439792e+06 -9.097348e+05 -1.014518e+11 -7.851470e+06
## [7919,] -2.183623e+04 -1.622962e+05 -4.342500e+10 -9.011589e+06
## [7920,] -1.095191e+08 -1.097697e+08 -2.700338e+11 -1.688043e+07
## [7921,] -3.038656e+11 -2.886484e+11 -1.617783e+15 -3.029949e+09
## [7922,] -2.472024e+11 -1.961127e+11 -1.225479e+15 -2.363606e+09
## [7923,] -4.707110e+09 -4.056311e+09 -2.043581e+13 -1.035194e+08
## [7924,] -1.797881e+06 -7.716856e+05 -1.014989e+11 -7.977460e+06
## [7925,] -4.100376e+04 -2.049202e+05 -4.344513e+10 -8.895791e+06
## [7926,] -1.151149e+08 -9.998420e+07 -2.701589e+11 -1.659296e+07
## [7927,] -3.048931e+11 -2.987489e+11 -1.618533e+15 -3.377911e+09
## [7928,] -2.463957e+11 -1.961120e+11 -1.226047e+15 -2.216050e+09
## [7929,] -4.607219e+09 -3.704427e+09 -2.044528e+13 -9.703737e+07
## [7930,] -2.468934e+06 -1.213151e+06 -1.015459e+11 -8.011303e+06
## [7931,] -1.132140e+05 -6.655518e+04 -4.348540e+10 -9.001792e+06
## [7932,] -1.115803e+08 -1.098177e+08 -2.704094e+11 -1.676182e+07
## [7933,] -3.300944e+11 -2.787191e+11 -1.619283e+15 -2.978698e+09
## [7934,] -2.455903e+11 -2.415868e+11 -1.226615e+15 -2.316372e+09
## [7935,] -4.341313e+09 -3.963716e+09 -2.045475e+13 -1.067703e+08
## [7936,] -1.999120e+06 -9.053671e+05 -1.015930e+11 -7.906208e+06
## [7937,] -5.450128e+04 -1.268041e+05 -4.348540e+10 -8.884427e+06
## [7938,] -1.131023e+08 -1.048590e+08 -2.704094e+11 -1.672265e+07
## [7939,] -3.430707e+11 -2.499787e+11 -1.619283e+15 -3.302414e+09
## [7940,] -2.463950e+11 -2.336786e+11 -1.226615e+15 -2.491335e+09
## [7941,] -4.410549e+09 -4.231676e+09 -2.045475e+13 -1.027002e+08
## [7942,] -1.329116e+06 -1.211468e+06 -1.015930e+11 -8.066386e+06
## [7943,] -4.397057e+04 -2.070009e+05 -4.350555e+10 -8.927051e+06
## [7944,] -1.159359e+08 -1.024380e+08 -2.705346e+11 -1.653369e+07
```

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## [7945,] -3.279551e+11 -2.886459e+11 -1.620033e+15 -3.164543e+09
## [7946,] -2.391998e+11 -2.107427e+11 -1.227184e+15 -2.450936e+09
## [7947,] -4.123538e+09 -4.096698e+09 -2.046422e+13 -1.083057e+08
## [7948,] -1.578844e+06 -9.039135e+05 -1.016400e+11 -7.860243e+06
## [7949,] -6.734603e+04 -1.653892e+05 -4.352569e+10 -8.823454e+06
## [7950,] -1.159523e+08 -1.073557e+08 -2.706599e+11 -1.624920e+07
## [7951,] -3.290226e+11 -2.689637e+11 -1.620784e+15 -2.326937e+09
## [7952,] -2.553313e+11 -2.259005e+11 -1.227752e+15 -2.308423e+09
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## [7954,] -1.484661e+06 -1.558249e+06 -1.016871e+11 -7.977875e+06
## [7955,] -1.492320e+04 -2.070569e+02 -4.352569e+10 -8.701472e+06
## [7956,] -1.172610e+08 -1.073715e+08 -2.707853e+11 -1.665338e+07
## [7957,] -3.131792e+11 -2.987456e+11 -1.621534e+15 -3.009044e+09
## [7958,] -2.321105e+11 -2.182547e+11 -1.228320e+15 -2.418764e+09
## [7959,] -4.314074e+09 -4.231974e+09 -2.048318e+13 -1.016885e+08
## [7960,] -2.142757e+06 -9.010099e+05 -1.017342e+11 -8.045530e+06
## [7961,] -4.885462e+04 -3.644217e+05 -4.354585e+10 -8.903952e+06
## [7962,] -1.206543e+08 -1.000606e+08 -2.707853e+11 -1.653639e+07
## [7963,] -3.343894e+11 -2.886443e+11 -1.621534e+15 -3.421026e+09
## [7964,] -2.652626e+11 -2.336764e+11 -1.228320e+15 -2.402833e+09
## [7965,] -4.259353e+09 -4.794309e+09 -2.049266e+13 -1.066173e+08
## [7966,] -1.845903e+06 -1.204749e+06 -1.017813e+11 -7.915011e+06
## [7967,] -7.336001e+04 -1.666345e+05 -4.356601e+10 -8.876329e+06
## [7968,] -1.193769e+08 -1.000912e+08 -2.710360e+11 -1.678331e+07
## [7969,] -3.236957e+11 -2.787151e+11 -1.623035e+15 -2.491372e+09
## [7970,] -2.455865e+11 -2.107399e+11 -1.229458e+15 -1.829371e+09
## [7971,] -4.411057e+09 -3.964197e+09 -2.050215e+13 -1.029900e+08
## [7972,] -1.781525e+06 -8.966631e+05 -1.018755e+11 -8.117929e+06
## [7973,] -4.149415e+04 -1.678846e+05 -4.360634e+10 -9.035222e+06
## [7974,] -1.155032e+08 -1.074190e+08 -2.711614e+11 -1.631249e+07
## [7975,] -3.048872e+11 -3.090180e+11 -1.623786e+15 -3.698736e+09
## [7976,] -2.274424e+11 -2.660965e+11 -1.230027e+15 -2.912172e+09
## [7977,] -4.466945e+09 -3.964294e+09 -2.051163e+13 -9.693657e+07
## [7978,] -1.457303e+06 -8.952166e+05 -1.019226e+11 -8.029031e+06
## [7979,] -8.006302e+04 -4.300572e+05 -4.362651e+10 -9.140393e+06
## [7980,] -1.132161e+08 -1.025308e+08 -2.712868e+11 -1.585790e+07
## [7981,] -3.279499e+11 -2.689597e+11 -1.624538e+15 -2.787978e+09
## [7982,] -2.536906e+11 -2.107385e+11 -1.230596e+15 -2.547801e+09
## [7983,] -4.523185e+09 -3.964390e+09 -2.052112e+13 -1.017502e+08
## [7984,] -1.457303e+06 -8.952166e+05 -1.019226e+11 -8.050178e+06
## [7985,] -4.415663e+04 -3.118517e+05 -4.364668e+10 -8.964918e+06
## [7986,] -1.064607e+08 -1.124697e+08 -2.714123e+11 -1.677268e+07
## [7987,] -3.430635e+11 -2.593789e+11 -1.625289e+15 -3.090974e+09
## [7988,] -2.660949e+11 -2.033561e+11 -1.231165e+15 -2.147211e+09
## [7989,] -4.650881e+09 -4.097383e+09 -2.053061e+13 -1.015545e+08
## [7990,] -1.777447e+06 -1.040348e+06 -1.019697e+11 -7.852601e+06
## [7991,] -6.717956e+04 -2.118968e+05 -4.364668e+10 -8.839041e+06
## [7992,] -1.117095e+08 -1.176032e+08 -2.714123e+11 -1.665527e+07
## [7993,] -3.343841e+11 -2.987405e+11 -1.626040e+15 -3.163856e+09
## [7994,] -2.644230e+11 -2.033554e+11 -1.231734e+15 -2.300122e+09
## [7995,] -4.594057e+09 -4.097481e+09 -2.054011e+13 -9.574879e+07
## [7996,] -1.815382e+06 -5.196848e+05 -1.020169e+11 -8.177851e+06
## [7997,] -7.015077e+04 -2.126008e+05 -4.366686e+10 -8.951872e+06
## [7998,] -1.168424e+08 -1.049999e+08 -2.715378e+11 -1.662245e+07
## [7999,] -3.142181e+11 -2.886393e+11 -1.626040e+15 -3.33833e+09
## [8000,] -2.488099e+11 -2.258954e+11 -1.231734e+15 -2.410341e+09
## [8001,] -4.314676e+09 -3.964582e+09 -2.054011e+13 -1.041173e+08
## [8002,] -1.382571e+06 -1.196377e+06 -1.020169e+11 -7.940726e+06
```

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## [8003,] -1.145446e+05 -2.126008e+05 -4.366686e+10 -8.919610e+06
## [8004,] -1.109680e+08 -1.074666e+08 -2.715378e+11 -1.674954e+07
## [8005,] -3.354628e+11 -3.090155e+11 -1.626040e+15 -3.163856e+09
## [8006,] -2.415801e+11 -2.182505e+11 -1.231734e+15 -2.426298e+09
## [8007,] -4.383700e+09 -4.509323e+09 -2.054011e+13 -1.043310e+08
## [8008,] -1.793294e+06 -1.194706e+06 -1.020641e+11 -8.135356e+06
## [8009,] -5.812735e+04 -2.133061e+05 -4.368705e+10 -9.053606e+06
## [8010,] -1.285196e+08 -1.025773e+08 -2.716633e+11 -1.625989e+07
## [8011,] -3.354619e+11 -2.886385e+11 -1.626792e+15 -3.519217e+09
## [8012,] -2.471933e+11 -2.336712e+11 -1.232303e+15 -2.671878e+09
## [8013,] -4.044156e+09 -4.097579e+09 -2.054960e+13 -1.058488e+08
## [8014,] -1.618028e+06 -1.037233e+06 -1.020641e+11 -7.970279e+06
## [8015,] -1.736383e+04 -2.133061e+05 -4.368705e+10 -8.795675e+06
## [8016,] -1.122484e+08 -1.025773e+08 -2.716633e+11 -1.652150e+07
## [8017,] -3.452478e+11 -2.767456e+11 -1.627544e+15 -3.497046e+09
## [8018,] -2.197668e+11 -2.258932e+11 -1.233443e+15 -2.580274e+09
## [8019,] -4.608567e+09 -3.834158e+09 -2.056860e+13 -1.009841e+08
## [8020,] -1.574546e+06 -8.865617e+05 -1.022056e+11 -7.957962e+06
## [8021,] -9.434806e+04 -2.633745e+05 -4.374764e+10 -8.932011e+06
## [8022,] -1.158757e+08 -1.075299e+08 -2.720401e+11 -1.702052e+07
## [8023,] -3.290120e+11 -2.886352e+11 -1.629800e+15 -3.652791e+09
## [8024,] -2.504272e+11 -2.182469e+11 -1.234582e+15 -2.169396e+09
## [8025,] -4.398077e+09 -4.370356e+09 -2.058760e+13 -1.027049e+08
## [8026,] -1.765243e+06 -1.031016e+06 -1.022528e+11 -8.055139e+06
## [8027,] -6.957718e+04 -2.161387e+05 -4.376784e+10 -8.992394e+06
## [8028,] -1.172005e+08 -1.002442e+08 -2.722914e+11 -1.673810e+07
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## [8032,] -1.337092e+06 -1.533547e+06 -1.023000e+11 -8.004522e+06
## [8033,] -8.355974e+04 -7.260038e+04 -4.378805e+10 -8.991093e+06
## [8034,] -1.164409e+08 -1.051095e+08 -2.724171e+11 -1.633556e+07
## [8035,] -3.300803e+11 -2.987347e+11 -1.631306e+15 -2.886528e+09
## [8036,] -2.569627e+11 -2.182455e+11 -1.235723e+15 -2.169254e+09
## [8037,] -4.737770e+09 -5.089881e+09 -2.060662e+13 -9.401789e+07
## [8038,] -1.923104e+06 -1.184704e+06 -1.023472e+11 -8.148752e+06
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## [8044,] -1.654961e+07 -1.506737e+07 -1.839292e+09 -9.158992e+03
## [8045,] -6.570367e+06 -6.247489e+06 -7.872823e+08 -4.659462e+04
## [8046,] -6.127762e+07 -5.106413e+07 -4.912499e+09 -8.637300e+05
## [8047,] -3.398717e+11 -2.623012e+11 -2.941735e+13 -1.377504e+09
## [8048,] -2.574024e+11 -2.059445e+11 -2.228379e+13 -1.029334e+09
## [8049,] -4.282537e+09 -3.487681e+09 -3.715993e+11 -2.497615e+07
## [8050,] -1.690940e+07 -1.448812e+07 -1.845628e+09 -2.015034e+04
## [8051,] -6.537424e+06 -5.074572e+06 -7.927118e+08 -5.971499e+04
## [8052,] -6.072878e+07 -5.107505e+07 -4.929395e+09 -8.408375e+05
## [8053,] -3.280225e+11 -2.719337e+11 -2.951852e+13 -1.322659e+09
## [8054,] -2.492365e+11 -2.133720e+11 -2.236044e+13 -1.003425e+09
## [8055,] -4.241639e+09 -3.612490e+09 -3.728773e+11 -2.087810e+07
## [8056,] -1.764702e+07 -1.336928e+07 -1.851976e+09 -2.322887e+04
## [8057,] -6.944969e+06 -4.855956e+06 -7.927118e+08 -6.410848e+04
## [8058,] -6.260815e+07 -4.771153e+07 -4.929395e+09 -8.430335e+05
## [8059,] -3.355380e+11 -2.817408e+11 -2.951852e+13 -1.309135e+09
## [8060,] -2.444006e+11 -1.986473e+11 -2.236044e+13 -1.371266e+09
```

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## [8061,] -3.999793e+09 -4.268949e+09 -3.728773e+11 -2.354044e+07
## [8062,] -1.739728e+07 -1.282946e+07 -1.851976e+09 -1.870065e+04
## [8063,] -6.688809e+06 -4.642154e+06 -7.927118e+08 -5.781239e+04
## [8064,] -6.054242e+07 -4.937897e+07 -4.929395e+09 -9.943014e+05
## [8065,] -3.237661e+11 -3.122044e+11 -2.951852e+13 -1.823799e+09
## [8066,] -2.420004e+11 -2.364460e+11 -2.236044e+13 -1.407549e+09
## [8067,] -4.255283e+09 -3.365243e+09 -3.728773e+11 -2.508853e+07
## [8068,] -1.827918e+07 -1.448231e+07 -1.851976e+09 -1.595438e+04
## [8069,] -7.127145e+06 -5.074572e+06 -7.927118e+08 -5.478635e+04
## [8070,] -6.110236e+07 -5.107505e+07 -4.929395e+09 -9.332218e+05
## [8071,] -3.343761e+11 -2.787046e+11 -1.632812e+15 -3.142150e+09
## [8072,] -2.212862e+11 -2.336653e+11 -1.236863e+15 -2.079389e+09
## [8073,] -4.454291e+09 -4.233565e+09 -2.063515e+13 -1.006711e+08
## [8074,] -1.715807e+06 -7.437502e+05 -1.024890e+11 -8.136297e+06
## [8075,] -1.410150e+05 -1.033991e+05 -4.386893e+10 -8.856943e+06
## [8076,] -1.180620e+08 -9.558372e+07 -2.729201e+11 -1.668129e+07
## [8077,] -3.474337e+11 -2.787030e+11 -1.634318e+15 -3.110712e+09
## [8078,] -2.399797e+11 -2.415718e+11 -1.238005e+15 -2.441476e+09
## [8079,] -4.045128e+09 -4.652132e+09 -2.064467e+13 -1.057906e+08
## [8080,] -1.210661e+06 -1.178060e+06 -1.025362e+11 -7.975527e+06
## [8081,] -2.204228e+05 -1.038911e+05 -4.388916e+10 -8.808997e+06
## [8082,] -1.167654e+08 -1.101382e+08 -2.729201e+11 -1.664221e+07
## [8083,] -3.279385e+11 -2.787030e+11 -1.634318e+15 -3.247331e+09
## [8084,] -2.577826e+11 -2.258874e+11 -1.238005e+15 -2.299316e+09
## [8085,] -4.738191e+09 -4.370963e+09 -2.064467e+13 -1.002668e+08
## [8086,] -1.873580e+06 -1.178060e+06 -1.025362e+11 -8.081185e+06
## [8087,] -1.108203e+05 -2.211408e+05 -4.390940e+10 -9.190316e+06
## [8088,] -1.188601e+08 -9.795300e+07 -2.730460e+11 -1.660941e+07
## [8089,] -3.540563e+11 -2.886295e+11 -1.635072e+15 -3.007535e+09
## [8090,] -2.711287e+11 -2.336623e+11 -1.239146e+15 -2.322566e+09
## [8091,] -4.581225e+09 -4.371165e+09 -2.066371e+13 -9.925195e+07
## [8092,] -1.359309e+06 -1.341974e+06 -1.026308e+11 -7.812294e+06
## [8093,] -1.017253e+05 -2.218601e+05 -4.392964e+10 -8.850149e+06
## [8094,] -1.168149e+08 -1.027786e+08 -2.732978e+11 -1.669024e+07
## [8095,] -3.343717e+11 -2.593672e+11 -1.636579e+15 -2.434504e+09
## [8096,] -2.439676e+11 -2.182405e+11 -1.239717e+15 -2.417261e+09
## [8097,] -4.385116e+09 -4.510760e+09 -2.067324e+13 -9.968474e+07
## [8098,] -1.721336e+06 -7.345528e+05 -1.028201e+11 -8.018330e+06
## [8099,] -8.559525e+04 -2.736692e+05 -4.401066e+10 -9.006203e+06
## [8100,] -1.181783e+08 -1.052819e+08 -2.738016e+11 -1.643267e+07
## [8101,] -3.332912e+11 -3.090002e+11 -1.639597e+15 -4.236497e+09
## [8102,] -2.487954e+11 -2.182369e+11 -1.242575e+15 -2.329948e+09
## [8103,] -4.884231e+09 -4.371771e+09 -2.072089e+13 -1.072130e+08
## [8104,] -1.434808e+06 -7.306286e+05 -1.029621e+11 -8.014418e+06
## [8105,] -7.045061e+04 -3.888034e+05 -4.407147e+10 -8.940582e+06
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## [8109,] -4.696110e+09 -3.835862e+09 -2.073996e+13 -9.895689e+07
## [8110,] -1.617095e+06 -8.622677e+05 -1.030095e+11 -7.955513e+06
## [8111,] -2.229989e+05 -1.436556e+05 -4.409175e+10 -8.989223e+06
## [8112,] -1.125887e+08 -1.029026e+08 -2.743060e+11 -1.695634e+07
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## [8116,] -1.709327e+06 -8.594318e+05 -1.031043e+11 -8.069719e+06
## [8117,] -5.951350e+04 -1.852171e+05 -4.415261e+10 -9.144839e+06
## [8118,] -1.144060e+08 -1.005198e+08 -2.745583e+11 -1.652819e+07
```

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## [8121,] -4.525960e+09 -4.797484e+09 -2.077814e+13 -1.152562e+08
## [8122,] -1.722860e+06 -9.986859e+05 -1.032466e+11 -7.972868e+06
## [8123,] -7.028035e+04 -3.353203e+05 -4.419321e+10 -8.918140e+06
## [8124,] -1.152080e+08 -1.005504e+08 -2.748108e+11 -1.681428e+07
## [8125,] -3.607294e+11 -2.499519e+11 -1.645640e+15 -2.884969e+09
## [8126,] -2.652366e+11 -2.174740e+11 -1.247154e+15 -2.267139e+09
## [8127,] -4.668091e+09 -4.100123e+09 -2.079724e+13 -1.049672e+08
## [8128,] -1.386671e+06 -8.537740e+05 -1.032940e+11 -8.032045e+06
## [8129,] -9.965945e+04 -2.825342e+05 -4.423383e+10 -9.003653e+06
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## [8132,] -2.536675e+11 -2.336512e+11 -1.247727e+15 -2.352833e+09
## [8133,] -4.625387e+09 -3.836524e+09 -2.080680e+13 -1.009473e+08
## [8134,] -1.758184e+06 -9.956337e+05 -1.033415e+11 -8.142436e+06
## [8135,] -1.632087e+05 -1.124338e+05 -4.423383e+10 -9.036067e+06
## [8136,] -1.175647e+08 -1.029956e+08 -2.750634e+11 -1.670921e+07
## [8137,] -3.441302e+11 -2.886164e+11 -1.647153e+15 -3.140523e+09
## [8138,] -2.610747e+11 -2.033361e+11 -1.247727e+15 -2.360709e+09
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## [8140,] -2.198052e+06 -1.492194e+06 -1.033415e+11 -8.227784e+06
## [8141,] -1.366420e+05 -1.124338e+05 -4.423383e+10 -9.127728e+06
## [8142,] -1.154979e+08 -1.054388e+08 -2.750634e+11 -1.652385e+07
## [8143,] -3.141941e+11 -3.089917e+11 -1.647153e+15 -3.461717e+09
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## [8147,] -5.626346e+04 -4.606492e+05 -4.423383e+10 -9.121801e+06
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## [8149,] -3.289919e+11 -2.886164e+11 -1.647153e+15 -3.256478e+09
## [8150,] -2.297467e+11 -1.960863e+11 -1.247727e+15 -2.512852e+09
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## [8152,] -1.180582e+06 -9.941094e+05 -1.033889e+11 -8.083062e+06
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## [8154,] -1.160458e+08 -1.129727e+08 -2.753161e+11 -1.683935e+07
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## [8169,] -4.526988e+09 -4.654634e+09 -2.087374e+13 -9.647841e+07
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## [8171,] -1.165706e+05 -3.442284e+05 -4.439649e+10 -9.313819e+06
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## [8173,] -3.268501e+11 -3.089849e+11 -1.653210e+15 -3.363008e+09
## [8174,] -2.544791e+11 -2.182247e+11 -1.252315e+15 -2.375904e+09
## [8175,] -4.597787e+09 -3.968047e+09 -2.088331e+13 -9.383881e+07
## [8176,] -1.821648e+06 -5.897662e+05 -1.037215e+11 -8.096519e+06
```



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## [8178,] -1.166776e+08 -9.597259e+07 -2.762015e+11 -1.687345e+07
## [8179,] -3.226005e+11 -2.689288e+11 -1.653968e+15 -3.341335e+09
## [8180,] -2.235606e+11 -2.495908e+11 -1.253463e+15 -2.367855e+09
## [8181,] -4.457147e+09 -3.968240e+09 -2.090246e+13 -9.549790e+07
## [8182,] -1.601121e+06 -9.789301e+05 -1.038642e+11 -8.109571e+06
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## [8186,] -2.512122e+11 -2.107083e+11 -1.255187e+15 -2.685507e+09
## [8187,] -6.078263e+09 -4.101493e+09 -2.093120e+13 -1.104022e+08
## [8188,] -2.558192e+06 -1.128822e+06 -1.039594e+11 -8.118277e+06
## [8189,] -9.363590e+04 -4.090725e+05 -4.449831e+10 -9.101807e+06
## [8190,] -1.116291e+08 -1.081171e+08 -2.767080e+11 -1.702671e+07
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## [8192,] -2.447492e+11 -2.415493e+11 -1.255187e+15 -2.359744e+09
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## [8194,] -1.616162e+06 -1.292860e+06 -1.039594e+11 -8.135286e+06
## [8195,] -1.028592e+05 -1.965670e+05 -4.449831e+10 -9.101807e+06
## [8196,] -1.170023e+08 -1.056429e+08 -2.767080e+11 -1.717516e+07
## [8197,] -3.162760e+11 -2.987063e+11 -1.657001e+15 -3.901403e+09
## [8198,] -2.727985e+11 -2.182212e+11 -1.255187e+15 -2.528144e+09
## [8199,] -4.626738e+09 -4.236648e+09 -2.093120e+13 -1.003067e+08
## [8200,] -1.066322e+06 -1.292860e+06 -1.039594e+11 -8.067358e+06
## [8201,] -1.674525e+04 -1.191941e+05 -4.449831e+10 -9.196776e+06
## [8202,] -1.134061e+08 -1.007804e+08 -2.767080e+11 -1.709591e+07
## [8203,] -2.826287e+11 -3.974294e+11 -1.657001e+15 -3.298024e+09
## [8204,] -2.391632e+11 -2.830614e+11 -1.255187e+15 -1.515098e+09
## [8205,] -4.727050e+09 -4.101591e+09 -2.094079e+13 -9.453726e+07
## [8206,] -1.769388e+06 -9.743991e+05 -1.040070e+11 -8.212150e+06
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## [8210,] -2.503981e+11 -2.258642e+11 -1.256337e+15 -2.181822e+09
## [8211,] -4.712774e+09 -4.101689e+09 -2.095037e+13 -9.414547e+07
## [8212,] -1.867894e+06 -8.313295e+05 -1.040546e+11 -8.306563e+06
## [8213,] -6.429590e+04 -1.979245e+05 -4.453906e+10 -9.152540e+06
## [8214,] -1.185940e+08 -1.106521e+08 -2.769615e+11 -1.686196e+07
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## [8216,] -2.552927e+11 -2.107069e+11 -1.256337e+15 -2.391223e+09
## [8217,] -4.727155e+09 -4.236847e+09 -2.095037e+13 -1.011778e+08
## [8218,] -1.629323e+06 -6.996133e+05 -1.041022e+11 -8.080385e+06
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## [8220,] -1.165511e+08 -1.081807e+08 -2.772150e+11 -1.702231e+07
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## [8222,] -2.487756e+11 -2.258627e+11 -1.257487e+15 -2.438909e+09
## [8223,] -4.556232e+09 -4.513942e+09 -2.096955e+13 -9.994893e+07
## [8224,] -1.570789e+06 -1.460625e+06 -1.041498e+11 -8.229573e+06
## [8225,] -7.818877e+04 -2.454929e+05 -4.457984e+10 -9.132115e+06
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## [8229,] -4.945718e+09 -3.968914e+09 -2.096955e+13 -9.848938e+07
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## [8233,] -3.332665e+11 -2.886016e+11 -1.660797e+15 -2.943694e+09
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```

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## [8237,] -9.598870e+04 -4.139745e+05 -4.460024e+10 -9.258734e+06
## [8238,] -1.155364e+08 -1.008571e+08 -2.773419e+11 -1.650921e+07
## [8239,] -3.007431e+11 -3.194244e+11 -1.660797e+15 -4.077510e+09
## [8240,] -2.512076e+11 -2.033230e+11 -1.258638e+15 -2.406816e+09
## [8241,] -4.641613e+09 -3.709731e+09 -2.098874e+13 -1.035694e+08
## [8242,] -1.680992e+06 -5.769267e+05 -1.042452e+11 -8.276920e+06
## [8243,] -1.513795e+05 -1.223809e+05 -4.462064e+10 -9.099871e+06
## [8244,] -1.150388e+08 -1.032905e+08 -2.774687e+11 -1.706457e+07
## [8245,] -3.152235e+11 -3.089755e+11 -1.661556e+15 -3.449053e+09
## [8246,] -2.391579e+11 -2.107034e+11 -1.259213e+15 -2.446701e+09
## [8247,] -4.570683e+09 -3.969203e+09 -2.099834e+13 -1.025224e+08
## [8248,] -1.757212e+06 -9.653686e+05 -1.042928e+11 -8.204234e+06
## [8249,] -1.597207e+05 -9.092480e+04 -4.464104e+10 -9.172700e+06
## [8250,] -1.178964e+08 -1.057529e+08 -2.775956e+11 -1.735885e+07
## [8251,] -3.618296e+11 -3.089747e+11 -1.662316e+15 -3.492890e+09
## [8252,] -2.375738e+11 -2.107034e+11 -1.259213e+15 -2.486989e+09
## [8253,] -4.916641e+09 -4.102178e+09 -2.099834e+13 -9.544270e+07
## [8254,] -1.617639e+06 -8.216040e+05 -1.043882e+11 -8.127720e+06
## [8255,] -1.009857e+05 -3.568959e+05 -4.468187e+10 -9.352207e+06
## [8256,] -1.158595e+08 -1.009185e+08 -2.778495e+11 -1.733171e+07
## [8257,] -3.300417e+11 -2.583900e+11 -1.664597e+15 -2.793546e+09
## [8258,] -2.668914e+11 -2.182140e+11 -1.260941e+15 -2.257678e+09
## [8259,] -4.556954e+09 -4.102570e+09 -2.103676e+13 -9.652800e+07
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## [8261,] -1.115745e+05 -2.508220e+05 -4.472271e+10 -9.259766e+06
## [8262,] -1.151372e+08 -1.009646e+08 -2.782305e+11 -1.624258e+07
## [8263,] -3.289691e+11 -2.885950e+11 -1.666879e+15 -3.243587e+09
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## [8265,] -4.873346e+09 -3.969780e+09 -2.105598e+13 -9.491949e+07
## [8266,] -1.444050e+06 -1.824784e+06 -1.045791e+11 -8.368025e+06
## [8267,] -5.873317e+04 -3.040495e+05 -4.476357e+10 -9.301957e+06
## [8268,] -1.177361e+08 -1.058472e+08 -2.783575e+11 -1.661741e+07
## [8269,] -3.027842e+11 -3.300391e+11 -1.666879e+15 -2.953151e+09
## [8270,] -2.455426e+11 -2.182119e+11 -1.262669e+15 -2.165910e+09
## [8271,] -4.742716e+09 -4.102765e+09 -2.105598e+13 -9.491949e+07
## [8272,] -1.865305e+06 -5.688296e+05 -1.045791e+11 -8.368025e+06
## [8273,] -7.386587e+04 -3.605572e+05 -4.476357e+10 -9.287001e+06
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## [8276,] -2.336320e+11 -2.495786e+11 -1.262669e+15 -2.510860e+09
## [8277,] -5.169989e+09 -4.375308e+09 -2.105598e+13 -9.821059e+07
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## [8292,] -1.136667e+08 -1.034459e+08 -2.787389e+11 -1.708816e+07
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## [8294,] -2.618808e+11 -2.258533e+11 -1.264976e+15 -2.535000e+09
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## [8296,] -9.504112e+05 -1.436713e+06 -1.047701e+11 -8.235221e+06
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## [8305,] -3.375722e+11 -2.593314e+11 -1.671448e+15 -4.076144e+09
## [8306,] -2.204871e+11 -2.336276e+11 -1.266130e+15 -2.397891e+09
## [8307,] -4.529662e+09 -3.970454e+09 -2.112332e+13 -9.218847e+07
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## [8310,] -1.165732e+08 -1.109577e+08 -2.793751e+11 -1.691245e+07
## [8311,] -3.451940e+11 -2.689090e+11 -1.672972e+15 -3.106366e+09
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## [8362,] -2.013927e+06 -1.593935e+06 -1.054402e+11 -8.408817e+06
## [8363,] -1.361115e+05 -3.772644e+05 -4.513216e+10 -9.266195e+06
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## [8365,] -3.386454e+11 -2.885802e+11 -1.680604e+15 -3.392310e+09
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## [8371,] -3.195375e+11 -3.227064e+11 -2.951852e+13 -1.615201e+09
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## [8374,] -1.721113e+07 -1.392023e+07 -1.851976e+09 -1.466301e+04
## [8375,] -6.093664e+06 -5.759300e+06 -7.927118e+08 -5.341716e+04
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## [8383,] -3.142909e+11 -2.917216e+11 -2.951852e+13 -1.752859e+09
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## [8427,] -4.573783e+09 -3.972092e+09 -2.128731e+13 -1.049079e+08
## [8428,] -1.561761e+06 -7.819225e+05 -1.057760e+11 -8.422544e+06
## [8429,] -2.278166e+05 -3.254818e+05 -4.527591e+10 -9.334726e+06
## [8430,] -1.077259e+08 -1.137700e+08 -2.815435e+11 -1.731695e+07
## [8431,] -3.451787e+11 -3.300171e+11 -1.685957e+15 -3.230808e+09
## [8432,] -2.391348e+11 -2.660318e+11 -1.277121e+15 -2.582615e+09
## [8433,] -4.573990e+09 -4.659327e+09 -2.130664e+13 -9.694888e+07
## [8434,] -1.692982e+06 -6.543516e+05 -1.058241e+11 -8.288989e+06
## [8435,] -1.716373e+05 -2.238802e+05 -4.529647e+10 -9.264585e+06
## [8436,] -1.171293e+08 -1.013797e+08 -2.816713e+11 -1.652585e+07
## [8437,] -3.310879e+11 -2.688947e+11 -1.686722e+15 -3.209566e+09
## [8438,] -2.415200e+11 -2.415200e+11 -1.277701e+15 -1.830820e+09
## [8439,] -4.227008e+09 -4.659431e+09 -2.131631e+13 -1.150515e+08
## [8440,] -1.650459e+06 -5.370137e+05 -1.059201e+11 -8.496616e+06
## [8441,] -9.832276e+04 -2.260548e+05 -4.535816e+10 -9.201003e+06
## [8442,] -1.143465e+08 -1.038504e+08 -2.820549e+11 -1.732247e+07
## [8443,] -3.215028e+11 -2.786449e+11 -1.689020e+15 -3.369655e+09
## [8444,] -2.487451e+11 -2.181898e+11 -1.280602e+15 -2.340754e+09
## [8445,] -4.876654e+09 -4.241026e+09 -2.135502e+13 -1.005610e+08
## [8446,] -1.625502e+06 -9.106096e+05 -1.060643e+11 -8.354060e+06
## [8447,] -9.928350e+04 -4.532113e+05 -4.539931e+10 -9.477194e+06
## [8448,] -1.203419e+08 -1.014566e+08 -2.823108e+11 -1.703755e+07
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## [8450,] -2.359675e+11 -2.336091e+11 -1.280602e+15 -2.427890e+09
## [8451,] -4.746084e+09 -4.241126e+09 -2.136470e+13 -1.033240e+08
## [8452,] -1.421221e+06 -1.215846e+06 -1.061124e+11 -8.324015e+06
## [8453,] -8.487246e+04 -3.316137e+05 -4.541989e+10 -9.322450e+06
## [8454,] -1.180072e+08 -1.038972e+08 -2.824388e+11 -1.703398e+07
## [8455,] -3.353867e+11 -2.688900e+11 -1.691318e+15 -3.166948e+09
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## [8457,] -4.688576e+09 -3.972862e+09 -2.136470e+13 -1.056778e+08
## [8458,] -1.859632e+06 -6.469552e+05 -1.061124e+11 -8.393013e+06
## [8459,] -1.880031e+05 -1.837730e+05 -4.541989e+10 -9.304484e+06
## [8460,] -1.222206e+08 -1.088493e+08 -2.825668e+11 -1.699092e+07
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## [8462,] -2.519907e+11 -2.181883e+11 -1.281763e+15 -2.475938e+09
## [8463,] -4.731779e+09 -3.842111e+09 -2.137438e+13 -1.048344e+08
## [8464,] -1.528026e+06 -1.055366e+06 -1.061605e+11 -8.371526e+06
## [8465,] -1.097849e+05 -2.783258e+05 -4.544048e+10 -9.348104e+06
## [8466,] -1.193274e+08 -9.909070e+07 -2.825668e+11 -1.717888e+07
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## [8469,] -4.378847e+09 -4.241424e+09 -2.139375e+13 -1.031578e+08
## [8470,] -1.636744e+06 -9.047855e+05 -1.062567e+11 -8.406300e+06
## [8471,] -7.507528e+04 -2.304355e+05 -4.548166e+10 -9.381477e+06
## [8472,] -1.170192e+08 -1.088812e+08 -2.828229e+11 -1.715188e+07
## [8473,] -3.364644e+11 -3.089399e+11 -1.693619e+15 -3.114461e+09
## [8474,] -2.536205e+11 -1.960450e+11 -1.282925e+15 -2.348313e+09
## [8475,] -4.560772e+09 -4.378847e+09 -2.139375e+13 -1.014640e+08
## [8476,] -1.598801e+06 -1.052228e+06 -1.062567e+11 -8.401976e+06
## [8477,] -1.242484e+05 -2.799407e+05 -4.548166e+10 -9.369460e+06
## [8478,] -1.126594e+08 -1.039439e+08 -2.828229e+11 -1.723126e+07
## [8479,] -3.506670e+11 -2.499038e+11 -1.693619e+15 -3.093691e+09
## [8480,] -2.552572e+11 -2.258308e+11 -1.282925e+15 -2.316972e+09
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## [8483,] -9.812160e+04 -3.342591e+05 -4.548166e+10 -9.324465e+06
## [8484,] -1.172948e+08 -1.015336e+08 -2.829510e+11 -1.674436e+07
## [8485,] -3.662896e+11 -2.885655e+11 -1.694386e+15 -2.899758e+09
## [8486,] -2.343895e+11 -2.415117e+11 -1.284087e+15 -2.316825e+09
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## [8493,] -4.674880e+09 -3.973440e+09 -2.142283e+13 -9.630608e+07
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## [8518,] -1.560845e+06 -6.310737e+05 -1.067385e+11 -8.377116e+06
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## [8523,] -4.819948e+09 -4.379960e+09 -2.150047e+13 -1.005810e+08
## [8524,] -1.830569e+06 -7.538007e+05 -1.067867e+11 -8.446440e+06
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## [8548,] -1.512499e+06 -7.471809e+05 -1.070281e+11 -8.481690e+06
## [8549,] -8.475675e+04 -1.964315e+05 -4.581184e+10 -9.450489e+06
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## [8561,] -1.241084e+05 -4.771836e+05 -4.587388e+10 -9.509920e+06
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## [8616,] -1.123517e+08 -9.717408e+07 -2.864208e+11 -1.696289e+07
## [8617,] -3.027313e+11 -3.089161e+11 -1.715164e+15 -3.608783e+09
## [8618,] -2.519676e+11 -2.181669e+11 -1.299246e+15 -2.713188e+09
## [8619,] -4.663292e+09 -4.381780e+09 -2.167566e+13 -1.010674e+08
## [8620,] -6.677712e+05 -1.506415e+06 -1.076569e+11 -8.444024e+06
## [8621,] -1.331062e+05 -3.038810e+05 -4.608098e+10 -9.469348e+06
## [8622,] -1.164802e+08 -1.068717e+08 -2.866787e+11 -1.750212e+07
## [8623,] -3.225293e+11 -3.628864e+11 -1.716708e+15 -3.366462e+09
## [8624,] -2.471037e+11 -2.181655e+11 -1.300415e+15 -2.497771e+09
## [8625,] -4.865777e+09 -3.976138e+09 -2.169517e+13 -9.631517e+07
## [8626,] -1.448313e+06 -6.058359e+05 -1.077538e+11 -8.803400e+06
## [8627,] -1.732111e+05 -2.545093e+05 -4.614321e+10 -9.556116e+06
## [8628,] -1.178250e+08 -1.020270e+08 -2.870657e+11 -1.746125e+07
## [8629,] -3.407737e+11 -2.592831e+11 -1.719026e+15 -2.837240e+09
## [8630,] -2.511501e+11 -2.032713e+11 -1.302171e+15 -2.441110e+09
## [8631,] -4.437789e+09 -3.845428e+09 -2.171469e+13 -1.101634e+08
## [8632,] -1.610494e+06 -1.001131e+06 -1.078507e+11 -8.527006e+06
## [8633,] -1.178997e+05 -9.549691e+04 -4.616396e+10 -9.551741e+06
## [8634,] -1.181182e+08 -1.119581e+08 -2.873238e+11 -1.720495e+07
## [8635,] -3.037518e+11 -2.986370e+11 -1.720571e+15 -3.366019e+09
## [8636,] -2.544112e+11 -2.181619e+11 -1.303342e+15 -2.424954e+09
## [8637,] -4.550254e+09 -4.382387e+09 -2.173422e+13 -9.637517e+07
## [8638,] -1.839430e+06 -8.532092e+05 -1.079962e+11 -8.689250e+06
## [8639,] -1.194792e+05 -3.098068e+05 -4.622624e+10 -9.605407e+06
## [8640,] -1.168377e+08 -1.094561e+08 -2.874530e+11 -1.749042e+07
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## [8642,] -2.487146e+11 -2.106494e+11 -1.303928e+15 -2.521694e+09
## [8643,] -4.550357e+09 -3.976620e+09 -2.174399e+13 -1.037174e+08
## [8644,] -1.368447e+06 -5.999028e+05 -1.079962e+11 -8.527328e+06
## [8645,] -1.031241e+05 -3.668244e+05 -4.622624e+10 -9.484158e+06
## [8646,] -1.181348e+08 -1.069665e+08 -2.874530e+11 -1.751044e+07
## [8647,] -3.225241e+11 -3.193561e+11 -1.721345e+15 -3.153119e+09
## [8648,] -2.422841e+11 -2.414862e+11 -1.303928e+15 -2.337797e+09
## [8649,] -4.607014e+09 -4.522160e+09 -2.174399e+13 -1.011750e+08
## [8650,] -1.880112e+06 -7.209939e+05 -1.079962e+11 -8.584046e+06
## [8651,] -2.380687e+05 -3.668244e+05 -4.622624e+10 -9.453966e+06
## [8652,] -1.171131e+08 -9.730971e+07 -2.875821e+11 -1.720770e+07
## [8653,] -3.089084e+11 -3.299758e+11 -1.722118e+15 -3.344248e+09
## [8654,] -2.495229e+11 -2.032679e+11 -1.305099e+15 -1.848614e+09
## [8655,] -4.635683e+09 -3.845902e+09 -2.176353e+13 -1.039619e+08
## [8656,] -1.617795e+06 -9.919772e+05 -1.081418e+11 -8.562531e+06
## [8657,] -1.279932e+05 -3.696064e+05 -4.628856e+10 -9.619622e+06
## [8658,] -1.102566e+08 -1.045524e+08 -2.878405e+11 -1.770039e+07
## [8659,] -3.289042e+11 -2.986336e+11 -1.723665e+15 -3.563128e+09
## [8660,] -2.375142e+11 -2.258024e+11 -1.305685e+15 -2.670232e+09
## [8661,] -4.438400e+09 -3.976909e+09 -2.177330e+13 -1.069872e+08
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## [8663,] -9.229394e+04 -3.696064e+05 -4.628856e+10 -9.471088e+06
## [8664,] -1.163704e+08 -1.021196e+08 -2.878405e+11 -1.755971e+07
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## [8705,] -6.702334e+06 -5.064249e+06 -8.008911e+08 -5.891998e+04
## [8706,] -5.946561e+07 -5.110782e+07 -4.980257e+09 -9.192080e+05
## [8707,] -3.290883e+11 -2.719313e+11 -2.982310e+13 -1.482995e+09
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## [8710,] -1.731603e+07 -1.384757e+07 -1.871085e+09 -1.005365e+04
## [8711,] -6.804323e+06 -4.845859e+06 -8.008911e+08 -5.586471e+04
## [8712,] -6.170089e+07 -4.941119e+07 -4.980257e+09 -8.450469e+05
## [8713,] -3.280199e+11 -2.528384e+11 -2.982310e+13 -1.329279e+09
## [8714,] -2.476170e+11 -2.059417e+11 -2.259115e+13 -1.377110e+09
## [8715,] -4.187579e+09 -3.365509e+09 -3.767247e+11 -2.802358e+07
## [8716,] -1.744039e+07 -1.335252e+07 -1.871085e+09 -1.066064e+04
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## [8721,] -4.269249e+09 -3.488042e+09 -3.767247e+11 -2.346119e+07
## [8722,] -2.042351e+07 -1.281304e+07 -1.871085e+09 -1.933280e+04
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## [8724,] -5.619001e+07 -6.002056e+07 -4.980257e+09 -9.633215e+05
## [8725,] -3.530334e+11 -2.719313e+11 -2.982310e+13 -1.592622e+09
## [8726,] -2.524845e+11 -1.986452e+11 -2.259115e+13 -1.401297e+09
## [8727,] -4.241938e+09 -3.868786e+09 -3.767247e+11 -2.285678e+07
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## [8729,] -6.727759e+06 -5.287454e+06 -8.008911e+08 -5.939724e+04
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## [8734,] -1.406755e+06 -4.814158e+05 -1.083847e+11 -8.646200e+06
## [8735,] -1.237426e+05 -2.158546e+05 -4.639252e+10 -9.670778e+06
## [8736,] -1.164693e+08 -1.046462e+08 -2.886164e+11 -1.751792e+07
## [8737,] -3.583941e+11 -3.193475e+11 -1.729086e+15 -3.079429e+09
## [8738,] -2.752711e+11 -2.032623e+11 -1.309792e+15 -2.267005e+09
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## [8740,] -1.719572e+06 -7.080755e+05 -1.084819e+11 -8.402543e+06
## [8741,] -2.272480e+05 -5.072011e+05 -4.645495e+10 -9.617982e+06
## [8742,] -1.222547e+08 -9.983755e+07 -2.888752e+11 -1.712228e+07
## [8743,] -3.256980e+11 -2.786022e+11 -1.729861e+15 -2.946345e+09
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## [8746,] -1.490999e+06 -9.798376e+05 -1.085306e+11 -8.458952e+06
## [8747,] -7.103593e+04 -3.200986e+05 -4.647577e+10 -9.683690e+06
## [8748,] -1.157615e+08 -1.034879e+08 -2.891342e+11 -1.760372e+07
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## [8791,] -3.267566e+11 -2.688448e+11 -1.735292e+15 -3.120260e+09
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## [8793,] -4.510044e+09 -4.111580e+09 -2.192998e+13 -1.059436e+08
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## [8807,] -2.038838e+05 -4.519775e+05 -4.670510e+10 -9.635308e+06
## [8808,] -1.141292e+08 -1.073303e+08 -2.904307e+11 -1.823573e+07
## [8809,] -3.385769e+11 -2.986161e+11 -1.739954e+15 -2.965533e+09
## [8810,] -2.446675e+11 -2.106326e+11 -1.318024e+15 -2.568952e+09
## [8811,] -4.971650e+09 -3.978933e+09 -2.197906e+13 -1.088428e+08
## [8812,] -1.653052e+06 -1.274851e+06 -1.091638e+11 -8.547333e+06
## [8813,] -8.151381e+04 -5.214491e+05 -4.672598e+10 -9.658339e+06
## [8814,] -1.131251e+08 -1.098401e+08 -2.905605e+11 -1.756382e+07
```

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## [8815,] -3.256867e+11 -2.688400e+11 -1.739954e+15 -3.277872e+09
## [8816,] -2.486963e+11 -2.414682e+11 -1.318024e+15 -2.304765e+09
## [8817,] -4.652239e+09 -4.247398e+09 -2.197906e+13 -1.090613e+08
## [8818,] -1.770120e+06 -1.633930e+06 -1.091638e+11 -8.560420e+06
## [8819,] -1.360889e+05 -3.305585e+05 -4.672598e+10 -9.588335e+06
## [8820,] -1.172511e+08 -1.175104e+08 -2.906904e+11 -1.750007e+07
## [8821,] -2.955673e+11 -3.299548e+11 -1.740731e+15 -3.450756e+09
## [8822,] -2.414674e+11 -2.576748e+11 -1.318613e+15 -2.770009e+09
## [8823,] -5.001430e+09 -4.112266e+09 -2.199870e+13 -1.015751e+08
## [8824,] -1.554741e+06 -5.695214e+05 -1.092613e+11 -8.547547e+06
## [8825,] -1.521416e+05 -2.288244e+05 -4.676774e+10 -9.652593e+06
## [8826,] -1.209241e+08 -1.073778e+08 -2.908203e+11 -1.783847e+07
## [8827,] -3.385752e+11 -2.592606e+11 -1.741509e+15 -3.192880e+09
## [8828,] -2.527565e+11 -1.960030e+11 -1.319202e+15 -2.406978e+09
## [8829,] -4.796323e+09 -3.848177e+09 -2.199870e+13 -1.030572e+08
## [8830,] -1.630025e+06 -6.876490e+05 -1.092613e+11 -8.652528e+06
## [8831,] -1.559926e+05 -1.842975e+05 -4.676774e+10 -9.664790e+06
## [8832,] -1.196118e+08 -1.073778e+08 -2.908203e+11 -1.775770e+07
## [8833,] -3.484070e+11 -2.885154e+11 -1.741509e+15 -3.088423e+09
## [8834,] -2.327770e+11 -2.181427e+11 -1.319202e+15 -2.511562e+09
## [8835,] -4.206768e+09 -4.247597e+09 -2.199870e+13 -1.069178e+08
## [8836,] -1.046843e+06 -9.572771e+05 -1.092613e+11 -8.586840e+06
## [8837,] -1.001522e+05 -2.781646e+05 -4.676774e+10 -9.652593e+06
## [8838,] -1.136673e+08 -1.073778e+08 -2.908203e+11 -1.771738e+07
## [8839,] -3.440190e+11 -2.885146e+11 -1.742287e+15 -3.067655e+09
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## [8841,] -4.510865e+09 -3.979222e+09 -2.200853e+13 -1.039246e+08
## [8842,] -1.803870e+06 -1.107169e+06 -1.093101e+11 -8.811310e+06
## [8843,] -1.684611e+05 -3.922415e+05 -4.678863e+10 -9.730658e+06
## [8844,] -1.180630e+08 -1.124113e+08 -2.909502e+11 -1.745282e+07
## [8845,] -2.905196e+11 -2.986127e+11 -1.743065e+15 -3.277522e+09
## [8846,] -2.543889e+11 -2.032499e+11 -1.320381e+15 -2.327895e+09
## [8847,] -4.468889e+09 -4.666945e+09 -2.201836e+13 -1.022399e+08
## [8848,] -1.842084e+06 -1.441480e+06 -1.093590e+11 -8.740719e+06
## [8849,] -5.276012e+04 -1.856120e+05 -4.680953e+10 -9.707893e+06
## [8850,] -1.230726e+08 -1.099042e+08 -2.910801e+11 -1.749923e+07
## [8851,] -3.342489e+11 -2.885137e+11 -1.743065e+15 -3.182184e+09
## [8852,] -2.727091e+11 -2.181412e+11 -1.320381e+15 -2.304471e+09
## [8853,] -4.288824e+09 -4.957332e+09 -2.201836e+13 -1.043674e+08
## [8854,] -2.337130e+06 -1.445839e+05 -1.093590e+11 -8.718684e+06
## [8855,] -9.497812e+04 -5.994295e+05 -4.680953e+10 -9.665142e+06
## [8856,] -1.303456e+08 -1.025061e+08 -2.910801e+11 -1.729957e+07
## [8857,] -3.256832e+11 -2.885137e+11 -1.743065e+15 -3.203248e+09
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## [8859,] -4.811149e+09 -4.247896e+09 -2.202819e+13 -1.048112e+08
## [8860,] -1.334266e+06 -5.660667e+05 -1.094078e+11 -8.556593e+06
## [8861,] -1.212394e+05 -2.805879e+05 -4.683043e+10 -9.700428e+06
## [8862,] -1.209913e+08 -1.099363e+08 -2.913401e+11 -1.724265e+07
## [8863,] -3.057837e+11 -2.986111e+11 -1.744622e+15 -2.572938e+09
## [8864,] -2.511248e+11 -2.181398e+11 -1.321560e+15 -2.219455e+09
## [8865,] -4.667154e+09 -3.979512e+09 -2.203802e+13 -9.870366e+07
## [8866,] -2.424471e+06 -4.583701e+05 -1.094566e+11 -8.847094e+06
## [8867,] -1.431811e+05 -3.358515e+05 -4.685133e+10 -9.732717e+06
## [8868,] -1.202196e+08 -9.776251e+07 -2.914701e+11 -1.781011e+07
## [8869,] -3.068145e+11 -3.193294e+11 -1.745400e+15 -3.406561e+09
## [8870,] -2.390765e+11 -2.106270e+11 -1.322740e+15 -2.438468e+09
## [8871,] -4.696008e+09 -3.848745e+09 -2.205769e+13 -1.048581e+08
## [8872,] -8.770898e+05 -9.483265e+05 -1.095543e+11 -8.719117e+06
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## [8874,] -1.173670e+08 -1.050061e+08 -2.916001e+11 -1.759501e+07
## [8875,] -3.278107e+11 -2.986094e+11 -1.746179e+15 -3.224035e+09
## [8876,] -2.250111e+11 -2.576693e+11 -1.322740e+15 -2.502979e+09
## [8877,] -4.681675e+09 -3.848745e+09 -2.205769e+13 -1.046439e+08
## [8878,] -1.524854e+06 -6.800661e+05 -1.095543e+11 -8.604978e+06
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## [8882,] -2.543850e+11 -2.576686e+11 -1.323330e+15 -2.120997e+09
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## [8884,] -1.308337e+06 -6.775479e+05 -1.096521e+11 -8.675344e+06
## [8885,] -1.344925e+05 -4.633500e+05 -4.693499e+10 -9.696725e+06
## [8886,] -1.148212e+08 -1.100004e+08 -2.918603e+11 -1.774871e+07
## [8887,] -3.407407e+11 -2.885088e+11 -1.747737e+15 -2.904118e+09
## [8888,] -2.618010e+11 -1.959970e+11 -1.324510e+15 -2.280656e+09
## [8889,] -4.797382e+09 -4.194192e+09 -2.209706e+13 -9.631381e+07
## [8890,] -6.750343e+05 -1.805430e+06 -1.097499e+11 -8.539900e+06
## [8891,] -2.606366e+05 -1.148033e+05 -4.697685e+10 -9.639113e+06
## [8892,] -1.182125e+08 -1.026299e+08 -2.921206e+11 -1.792334e+07
## [8893,] -3.278072e+11 -2.785820e+11 -1.749296e+15 -2.974692e+09
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## [8897,] -1.398238e+05 -4.664762e+05 -4.699779e+10 -9.671300e+06
## [8898,] -1.237571e+08 -1.075521e+08 -2.922508e+11 -1.747668e+07
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## [8901,] -4.498047e+09 -4.113540e+09 -2.212662e+13 -1.073401e+08
## [8902,] -1.199588e+06 -7.990428e+05 -1.098966e+11 -8.632005e+06
## [8903,] -1.599895e+05 -5.381342e+05 -4.703968e+10 -9.668601e+06
## [8904,] -1.169812e+08 -1.126221e+08 -2.926415e+11 -1.850094e+07
## [8905,] -3.057753e+11 -3.088753e+11 -1.752415e+15 -3.705798e+09
## [8906,] -2.406596e+11 -2.335501e+11 -1.327464e+15 -2.195869e+09
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## [8910,] -1.169977e+08 -1.051471e+08 -2.927719e+11 -1.740226e+07
## [8911,] -3.374781e+11 -2.986019e+11 -1.753196e+15 -2.853539e+09
## [8912,] -2.470680e+11 -2.576624e+11 -1.328055e+15 -2.319117e+09
## [8913,] -4.740088e+09 -4.249092e+09 -2.214633e+13 -1.015951e+08
## [8914,] -1.243980e+06 -6.675215e+05 -1.100435e+11 -8.676209e+06
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## [8916,] -1.198793e+08 -1.051628e+08 -2.929022e+11 -1.782046e+07
## [8917,] -3.140750e+11 -3.193199e+11 -1.753976e+15 -3.449230e+09
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## [8919,] -4.697265e+09 -5.258256e+09 -2.217591e+13 -1.063372e+08
## [8920,] -1.359594e+06 -1.080000e+06 -1.101415e+11 -8.676425e+06
## [8921,] -1.090468e+05 -3.483653e+05 -4.714448e+10 -9.768891e+06
## [8922,] -1.196509e+08 -1.076631e+08 -2.931630e+11 -1.759163e+07
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## [8926,] -1.464100e+06 -7.908672e+05 -1.101905e+11 -8.870930e+06
## [8927,] -1.717133e+05 -4.748639e+05 -4.716545e+10 -9.955481e+06
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## [8929,] -3.374745e+11 -2.985986e+11 -1.756319e+15 -3.159728e+09
## [8930,] -2.250017e+11 -2.106179e+11 -1.330420e+15 -2.725885e+09
```

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## [8931,] -4.915037e+09 -4.249490e+09 -2.218578e+13 -1.061372e+08
## [8932,] -1.157252e+06 -6.637809e+05 -1.101905e+11 -8.698515e+06
## [8933,] -1.717133e+05 -3.492679e+05 -4.716545e+10 -9.749145e+06
## [8934,] -1.127032e+08 -1.101767e+08 -2.932934e+11 -1.787015e+07
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## [8936,] -2.438499e+11 -2.335464e+11 -1.330420e+15 -2.373831e+09
## [8937,] -4.740509e+09 -3.721189e+09 -2.218578e+13 -1.027148e+08
## [8938,] -1.555732e+06 -1.078413e+06 -1.101905e+11 -8.755799e+06
## [8939,] -1.407282e+05 -3.492679e+05 -4.716545e+10 -9.746081e+06
## [8940,] -1.194059e+08 -1.127032e+08 -2.932934e+11 -1.762817e+07
## [8941,] -3.429105e+11 -2.985986e+11 -1.756319e+15 -3.138807e+09
## [8942,] -2.511133e+11 -2.257719e+11 -1.330420e+15 -2.365933e+09
## [8943,] -4.611684e+09 -4.114128e+09 -2.218578e+13 -1.037783e+08
## [8944,] -1.220636e+06 -1.076826e+06 -1.102395e+11 -8.623997e+06
## [8945,] -1.234632e+05 -3.501717e+05 -4.718643e+10 -9.708007e+06
## [8946,] -1.223169e+08 -1.052255e+08 -2.934238e+11 -1.756430e+07
## [8947,] -2.996171e+11 -2.985977e+11 -1.757100e+15 -3.055734e+09
## [8948,] -2.319802e+11 -2.659593e+11 -1.331012e+15 -2.793987e+09
## [8949,] -4.755038e+09 -4.114227e+09 -2.219565e+13 -1.118345e+08
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## [8954,] -2.406536e+11 -2.335441e+11 -1.332196e+15 -2.279707e+09
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## [8957,] -9.886020e+04 -3.528900e+05 -4.724939e+10 -9.700895e+06
## [8958,] -1.189501e+08 -9.803470e+07 -2.938154e+11 -1.767396e+07
## [8959,] -3.418153e+11 -2.985944e+11 -1.760226e+15 -2.892767e+09
## [8960,] -2.593050e+11 -2.181255e+11 -1.333381e+15 -2.658150e+09
## [8961,] -4.712252e+09 -3.850452e+09 -2.223514e+13 -9.879939e+07
## [8962,] -1.331655e+06 -1.070492e+06 -1.104357e+11 -8.493515e+06
## [8963,] -9.674776e+04 -2.986802e+05 -4.729139e+10 -9.854648e+06
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## [8965,] -3.161600e+11 -3.088660e+11 -1.761008e+15 -3.232977e+09
## [8966,] -2.446471e+11 -2.106136e+11 -1.333973e+15 -2.453078e+09
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## [8970,] -1.118023e+08 -1.077900e+08 -2.942072e+11 -1.721333e+07
## [8971,] -3.429042e+11 -2.884940e+11 -1.761791e+15 -2.862605e+09
## [8972,] -2.626185e+11 -2.494847e+11 -1.334566e+15 -2.225518e+09
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## [8974,] -1.380200e+06 -5.399295e+05 -1.105338e+11 -8.747733e+06
## [8975,] -1.845075e+05 -2.482265e+05 -4.731240e+10 -9.797926e+06
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## [8979,] -4.209445e+09 -4.669556e+09 -2.226478e+13 -1.011475e+08
## [8980,] -8.458844e+05 -1.223610e+06 -1.106320e+11 -8.747950e+06
## [8981,] -2.407907e+05 -3.020304e+05 -4.737545e+10 -9.729476e+06
## [8982,] -1.195730e+08 -1.078376e+08 -2.945992e+11 -1.781340e+07
## [8983,] -3.267234e+11 -2.688147e+11 -1.764921e+15 -3.591729e+09
## [8984,] -2.486720e+11 -2.032306e+11 -1.336937e+15 -2.263659e+09
## [8985,] -4.857682e+09 -4.250586e+09 -2.229445e+13 -9.517910e+07
## [8986,] -1.590772e+06 -1.061026e+06 -1.107302e+11 -8.796763e+06
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```

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## [8997,] -4.655888e+09 -4.115501e+09 -2.232413e+13 -1.044237e+08
## [8998,] -1.474325e+06 -4.288553e+05 -1.108776e+11 -8.814795e+06
## [8999,] -1.683984e+05 -5.607898e+05 -4.745958e+10 -9.859148e+06
## [9000,] -1.220243e+08 -1.054451e+08 -2.952532e+11 -1.746354e+07
## [9001,] -3.352991e+11 -3.193043e+11 -1.768055e+15 -2.851988e+09
## [9002,] -2.584718e+11 -2.181184e+11 -1.339311e+15 -2.134059e+09
## [9003,] -4.756619e+09 -3.722681e+09 -2.234393e+13 -1.033880e+08
## [9004,] -1.278374e+06 -5.298700e+05 -1.109760e+11 -8.761950e+06
## [9005,] -1.500505e+05 -3.638684e+05 -4.750167e+10 -9.742780e+06
## [9006,] -1.173285e+08 -1.030173e+08 -2.953841e+11 -1.758014e+07
## [9007,] -3.331430e+11 -3.193035e+11 -1.768839e+15 -3.147887e+09
## [9008,] -2.430373e+11 -2.181177e+11 -1.339904e+15 -2.224869e+09
## [9009,] -4.829078e+09 -4.388662e+09 -2.234393e+13 -1.031752e+08
## [9010,] -1.346723e+06 -1.211805e+06 -1.109760e+11 -8.797307e+06
## [9011,] -1.500505e+05 -3.638684e+05 -4.750167e+10 -9.822568e+06
## [9012,] -1.188891e+08 -1.079328e+08 -2.953841e+11 -1.778141e+07
## [9013,] -3.224711e+11 -2.884866e+11 -1.768839e+15 -3.232108e+09
## [9014,] -2.617807e+11 -2.494778e+11 -1.339904e+15 -2.317645e+09
## [9015,] -4.388764e+09 -4.115795e+09 -2.235383e+13 -1.006548e+08
## [9016,] -1.097990e+06 -6.427825e+05 -1.110252e+11 -8.621340e+06
## [9017,] -2.223354e+05 -2.558990e+05 -4.752272e+10 -9.683329e+06
## [9018,] -1.178642e+08 -1.006179e+08 -2.955150e+11 -1.754643e+07
## [9019,] -3.439876e+11 -3.088566e+11 -1.769623e+15 -3.064693e+09
## [9020,] -2.351044e+11 -2.494771e+11 -1.340498e+15 -2.396331e+09
## [9021,] -4.237546e+09 -3.851590e+09 -2.235383e+13 -1.057582e+08
## [9022,] -8.211054e+05 -1.051601e+06 -1.110252e+11 -8.850586e+06
## [9023,] -1.961201e+05 -2.093718e+05 -4.754378e+10 -9.912303e+06
## [9024,] -1.178808e+08 -1.054922e+08 -2.956460e+11 -1.786504e+07
## [9025,] -3.374586e+11 -2.498282e+11 -1.770407e+15 -3.274460e+09
## [9026,] -2.601209e+11 -1.959773e+11 -1.341686e+15 -2.340913e+09
## [9027,] -4.756935e+09 -4.670705e+09 -2.237365e+13 -1.040743e+08
## [9028,] -1.447063e+06 -3.323181e+05 -1.111236e+11 -8.797634e+06
## [9029,] -2.524933e+05 -3.096367e+05 -4.756484e+10 -9.784699e+06
## [9030,] -1.184177e+08 -1.104817e+08 -2.957770e+11 -1.788162e+07
## [9031,] -3.280199e+11 -2.719313e+11 -2.982310e+13 -1.461539e+09
## [9032,] -2.460043e+11 -2.059410e+11 -2.266832e+13 -1.119465e+09
## [9033,] -4.228415e+09 -3.365598e+09 -3.780116e+11 -2.983298e+07
## [9034,] -1.681677e+07 -1.445905e+07 -1.877477e+09 -1.128932e+04
## [9035,] -6.421962e+06 -5.283940e+06 -8.036268e+08 -4.946383e+04
## [9036,] -6.077643e+07 -5.284420e+07 -4.997269e+09 -9.956246e+05
## [9037,] -3.227029e+11 -2.622972e+11 -2.992497e+13 -1.791837e+09
## [9038,] -2.443976e+11 -2.059410e+11 -2.266832e+13 -1.365039e+09
## [9039,] -4.269349e+09 -3.245254e+09 -3.780116e+11 -2.748027e+07
## [9040,] -1.657299e+07 -1.503180e+07 -1.877477e+09 -1.468078e+04
## [9041,] -6.647687e+06 -5.283940e+06 -8.036268e+08 -4.881139e+04
## [9042,] -6.227822e+07 -4.942194e+07 -4.997269e+09 -1.017233e+06
## [9043,] -3.174302e+11 -2.817376e+11 -2.992497e+13 -1.497327e+09
## [9044,] -2.460043e+11 -2.443976e+11 -2.266832e+13 -1.179970e+09
## [9045,] -4.201235e+09 -3.365598e+09 -3.780116e+11 -2.480541e+07
## [9046,] -1.644557e+07 -1.620450e+07 -1.883879e+09 -9.183573e+03
```

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## [9047,] -6.442970e+06 -4.839132e+06 -8.063672e+08 -5.291679e+04
## [9048,] -6.041572e+07 -6.004425e+07 -5.014310e+09 -1.026035e+06
## [9049,] -3.453215e+11 -2.622965e+11 -3.002702e+13 -1.482878e+09
## [9050,] -2.690499e+11 -1.986439e+11 -2.274562e+13 -1.294004e+09
## [9051,] -4.228613e+09 -3.488313e+09 -3.805918e+11 -2.705899e+07
## [9052,] -1.619835e+07 -1.501995e+07 -1.890292e+09 -1.226816e+04
## [9053,] -6.315208e+06 -5.276916e+06 -8.091123e+08 -5.125045e+04
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## [9057,] -4.255881e+09 -3.613041e+09 -3.805918e+11 -2.640960e+07
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## [9059,] -6.792368e+06 -5.053937e+06 -8.091123e+08 -5.326892e+04
## [9060,] -6.306026e+07 -5.462088e+07 -5.031380e+09 -9.374608e+05
## [9061,] -3.363757e+11 -2.985827e+11 -1.771191e+15 -2.901648e+09
## [9062,] -2.760796e+11 -2.257581e+11 -1.341686e+15 -2.255366e+09
## [9063,] -4.742508e+09 -3.982790e+09 -2.237365e+13 -1.116827e+08
## [9064,] -1.709167e+06 -4.238658e+05 -1.111236e+11 -8.647854e+06
## [9065,] -1.297598e+05 -3.666393e+05 -4.756484e+10 -9.855415e+06
## [9066,] -1.221087e+08 -1.132825e+08 -2.959080e+11 -1.781730e+07
## [9067,] -3.119696e+11 -3.407130e+11 -1.771975e+15 -3.210602e+09
## [9068,] -2.211553e+11 -2.494740e+11 -1.342875e+15 -2.468036e+09
## [9069,] -4.713931e+09 -4.251582e+09 -2.239347e+13 -1.032529e+08
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## [9071,] -1.314166e+05 -4.983155e+05 -4.762806e+10 -9.789834e+06
## [9072,] -1.190058e+08 -1.031259e+08 -2.963012e+11 -1.785687e+07
## [9073,] -3.203516e+11 -2.985793e+11 -1.774330e+15 -3.263366e+09
## [9074,] -2.543580e+11 -2.181127e+11 -1.344064e+15 -2.540952e+09
## [9075,] -4.571512e+09 -4.389371e+09 -2.241330e+13 -1.091077e+08
## [9076,] -1.512198e+06 -1.200057e+06 -1.113205e+11 -8.900122e+06
## [9077,] -1.180992e+05 -5.711372e+05 -4.764914e+10 -9.760868e+06
## [9078,] -1.085580e+08 -1.105621e+08 -2.964323e+11 -1.760131e+07
## [9079,] -3.309877e+11 -2.985785e+11 -1.775115e+15 -3.338241e+09
## [9080,] -2.446335e+11 -2.335286e+11 -1.344659e+15 -2.379952e+09
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## [9084,] -1.182737e+08 -1.105942e+08 -2.966946e+11 -1.796744e+07
## [9085,] -3.538890e+11 -2.884784e+11 -1.776686e+15 -3.231239e+09
## [9086,] -2.430298e+11 -2.181105e+11 -1.345849e+15 -2.648141e+09
## [9087,] -4.991495e+09 -3.723614e+09 -2.244306e+13 -9.663358e+07
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## [9094,] -1.327285e+06 -1.035988e+06 -1.115176e+11 -8.679450e+06
## [9095,] -1.306310e+05 -4.364953e+05 -4.773351e+10 -9.869161e+06
## [9096,] -1.177703e+08 -1.031880e+08 -2.968258e+11 -1.801453e+07
## [9097,] -3.171900e+11 -3.192931e+11 -1.778258e+15 -3.231065e+09
## [9098,] -2.881352e+11 -1.959712e+11 -1.347039e+15 -2.247016e+09
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## [9100,] -1.342753e+06 -1.034433e+06 -1.115669e+11 -8.896220e+06
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## [9102,] -1.152366e+08 -1.106585e+08 -2.972196e+11 -1.769009e+07
## [9103,] -3.299100e+11 -2.985727e+11 -1.780616e+15 -3.115311e+09
## [9104,] -2.535343e+11 -2.743677e+11 -1.348826e+15 -2.223788e+09
```



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## [9106,] -1.550551e+06 -7.479738e+05 -1.117643e+11 -8.892209e+06
## [9107,] -1.882948e+05 -5.815793e+05 -4.783908e+10 -9.914795e+06
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## [9111,] -4.845550e+09 -4.117462e+09 -2.252252e+13 -9.716605e+07
## [9112,] -1.281002e+06 -5.424929e+05 -1.118630e+11 -8.990552e+06
## [9113,] -2.443584e+05 -6.612929e+05 -4.788134e+10 -9.967742e+06
## [9114,] -1.212887e+08 -1.057435e+08 -2.977451e+11 -1.766548e+07
## [9115,] -3.016327e+11 -2.985693e+11 -1.783764e+15 -3.326510e+09
## [9116,] -2.592817e+11 -2.032141e+11 -1.351210e+15 -2.292883e+09
## [9117,] -4.157955e+09 -4.390586e+09 -2.253246e+13 -1.110571e+08
## [9118,] -1.294460e+06 -1.022035e+06 -1.119618e+11 -8.937182e+06
## [9119,] -2.129956e+05 -3.242623e+05 -4.792362e+10 -9.832265e+06
## [9120,] -1.161239e+08 -1.082665e+08 -2.981395e+11 -1.775528e+07
## [9121,] -3.844511e+11 -2.592170e+11 -1.785338e+15 -2.950575e+09
## [9122,] -2.650942e+11 -1.888485e+11 -1.353000e+15 -2.208011e+09
## [9123,] -4.530694e+09 -4.390890e+09 -2.256231e+13 -1.104445e+08
## [9124,] -1.614065e+06 -1.342328e+06 -1.120606e+11 -8.986520e+06
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## [9126,] -1.182295e+08 -1.009554e+08 -2.984026e+11 -1.775807e+07
## [9127,] -3.277652e+11 -2.985660e+11 -1.786914e+15 -3.423613e+09
## [9128,] -2.535282e+11 -1.959638e+11 -1.353597e+15 -2.705870e+09
## [9129,] -4.460620e+09 -4.253376e+09 -2.257226e+13 -1.128939e+08
## [9130,] -9.435701e+05 -2.343115e+06 -1.121100e+11 -8.982159e+06
## [9131,] -2.243143e+05 -4.486957e+05 -4.798708e+10 -9.862047e+06
## [9132,] -1.115603e+08 -1.058220e+08 -2.984026e+11 -1.825569e+07
## [9133,] -3.129953e+11 -2.785433e+11 -1.786914e+15 -3.456411e+09
## [9134,] -2.486506e+11 -2.414231e+11 -1.353597e+15 -2.323767e+09
## [9135,] -4.672898e+09 -4.253476e+09 -2.258221e+13 -1.063358e+08
## [9136,] -1.373529e+06 -7.374373e+05 -1.121595e+11 -8.848658e+06
## [9137,] -1.809017e+05 -5.909405e+05 -4.800824e+10 -9.879178e+06
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## [9139,] -3.067688e+11 -2.985651e+11 -1.787702e+15 -3.533456e+09
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## [9144,] -1.219345e+08 -1.034055e+08 -2.986658e+11 -1.779114e+07
## [9145,] -3.461560e+11 -3.192819e+11 -1.788490e+15 -3.124869e+09
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## [9155,] -1.546675e+05 -2.763942e+05 -4.807175e+10 -1.006095e+07
## [9156,] -1.227625e+08 -1.083620e+08 -2.989291e+11 -1.762273e+07
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## [9158,] -2.518940e+11 -2.335146e+11 -1.355985e+15 -2.043138e+09
## [9159,] -4.861091e+09 -4.118345e+09 -2.261208e+13 -1.014752e+08
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## [9161,] -8.757384e+04 -4.538288e+05 -4.809293e+10 -9.994326e+06
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```

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## [9170,] -2.551592e+11 -2.257385e+11 -1.357778e+15 -2.109458e+09
## [9171,] -4.978873e+09 -4.118639e+09 -2.264198e+13 -9.631699e+07
## [9172,] -9.332070e+05 -1.328200e+06 -1.124563e+11 -8.924905e+06
## [9173,] -1.764830e+05 -2.294096e+05 -4.813530e+10 -1.000089e+07
## [9174,] -1.220189e+08 -1.134507e+08 -2.993243e+11 -1.779309e+07
## [9175,] -3.026480e+11 -3.088320e+11 -1.792433e+15 -3.240103e+09
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## [9180,] -1.129415e+08 -1.010629e+08 -2.993243e+11 -1.864086e+07
## [9181,] -3.266928e+11 -2.785376e+11 -1.792433e+15 -3.304077e+09
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## [9186,] -1.157895e+08 -1.059636e+08 -2.995879e+11 -1.810006e+07
## [9187,] -3.439598e+11 -2.592084e+11 -1.794012e+15 -2.929449e+09
## [9188,] -2.617549e+11 -2.180941e+11 -1.359571e+15 -2.253190e+09
## [9189,] -4.673838e+09 -3.854626e+09 -2.267189e+13 -9.967779e+07
## [9190,] -1.426035e+06 -6.029844e+05 -1.126544e+11 -8.961029e+06
## [9191,] -1.960524e+05 -5.289804e+05 -4.822010e+10 -9.961307e+06
## [9192,] -1.186729e+08 -9.778307e+07 -2.998516e+11 -1.733726e+07
## [9193,] -3.129859e+11 -3.192741e+11 -1.795591e+15 -2.979943e+09
## [9194,] -2.470269e+11 -2.335094e+11 -1.360170e+15 -2.449749e+09
## [9195,] -4.616874e+09 -3.854721e+09 -2.268187e+13 -1.067096e+08
## [9196,] -1.268509e+06 -8.554693e+05 -1.127040e+11 -8.708434e+06
## [9197,] -2.011055e+05 -3.374476e+05 -4.824131e+10 -9.799572e+06
## [9198,] -1.231635e+08 -1.084893e+08 -2.999835e+11 -1.827270e+07
## [9199,] -3.098645e+11 -2.985560e+11 -1.796381e+15 -3.103213e+09
## [9200,] -2.462197e+11 -2.032024e+11 -1.361366e+15 -2.299412e+09
## [9201,] -4.891286e+09 -3.985974e+09 -2.270182e+13 -1.011922e+08
## [9202,] -1.494435e+06 -6.006133e+05 -1.127535e+11 -9.010432e+06
## [9203,] -2.205232e+05 -6.851167e+05 -4.828375e+10 -9.963390e+06
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## [9207,] -5.083674e+09 -3.986167e+09 -2.272179e+13 -1.107016e+08
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## [9209,] -1.248849e+05 -6.086942e+05 -4.832621e+10 -1.004132e+07
## [9210,] -1.229658e+08 -1.085529e+08 -3.005114e+11 -1.844245e+07
## [9211,] -3.352637e+11 -2.884546e+11 -1.799542e+15 -3.186493e+09
## [9212,] -2.518840e+11 -2.180891e+11 -1.363762e+15 -2.746868e+09
## [9213,] -4.589093e+09 -3.726412e+09 -2.274177e+13 -9.832628e+07
## [9214,] -1.310646e+06 -2.082692e+06 -1.129519e+11 -8.854842e+06
## [9215,] -2.570445e+05 -5.860731e+04 -4.836868e+10 -9.945530e+06
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## [9217,] -3.385058e+11 -2.985493e+11 -1.802706e+15 -2.918461e+09
## [9218,] -2.280474e+11 -2.335028e+11 -1.365559e+15 -2.457103e+09
## [9219,] -4.674883e+09 -3.986649e+09 -2.277175e+13 -1.110025e+08
## [9220,] -1.188833e+06 -5.923511e+05 -1.131008e+11 -8.881821e+06
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## [9223,] -3.363394e+11 -2.985484e+11 -1.803498e+15 -3.228286e+09
## [9224,] -2.382294e+11 -2.335021e+11 -1.366159e+15 -2.448992e+09
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## [9226,] -1.234725e+06 -4.809917e+05 -1.132001e+11 -8.824344e+06
## [9227,] -2.035665e+05 -4.714998e+05 -4.845369e+10 -1.001754e+07
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## [9235,] -3.406765e+11 -2.785255e+11 -1.804289e+15 -3.476380e+09
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## [9238,] -9.529159e+05 -9.822595e+05 -1.132498e+11 -9.002580e+06
## [9239,] -1.623208e+05 -4.075101e+05 -4.847495e+10 -1.005969e+07
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## [9242,] -2.358583e+11 -2.659112e+11 -1.367358e+15 -2.424816e+09
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## [9282,] -1.337812e+08 -1.038411e+08 -3.023628e+11 -1.798224e+07
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## [9376,] -1.631864e+07 -1.501995e+07 -1.890292e+09 -1.487098e+04
## [9377,] -6.315208e+06 -5.737315e+06 -8.091123e+08 -5.395041e+04
## [9378,] -6.382276e+07 -5.462088e+07 -5.031380e+09 -9.351450e+05
## [9379,] -3.333768e+11 -2.817359e+11 -3.012924e+13 -1.629848e+09
## [9380,] -2.500425e+11 -1.986432e+11 -2.282305e+13 -1.236249e+09
## [9381,] -4.338212e+09 -3.739961e+09 -3.805918e+11 -2.673331e+07
## [9382,] -1.836763e+07 -1.333578e+07 -1.890292e+09 -1.655281e+04
## [9383,] -6.715872e+06 -5.053937e+06 -8.091123e+08 -5.555739e+04
## [9384,] -5.622438e+07 -5.821572e+07 -5.031380e+09 -9.701826e+05
## [9385,] -3.280172e+11 -2.719289e+11 -3.012924e+13 -1.637382e+09
## [9386,] -2.656936e+11 -2.059397e+11 -2.282305e+13 -1.207893e+09
## [9387,] -4.449212e+09 -3.613041e+09 -3.805918e+11 -2.523954e+07
## [9388,] -1.855991e+07 -1.388604e+07 -1.890292e+09 -1.617129e+04
## [9389,] -6.843607e+06 -4.835771e+06 -8.091123e+08 -5.509584e+04
## [9390,] -6.420572e+07 -4.777489e+07 -5.031380e+09 -9.444253e+05
## [9391,] -3.234670e+11 -3.087955e+11 -1.826525e+15 -3.131191e+09
## [9392,] -2.575902e+11 -2.494221e+11 -1.383602e+15 -2.136330e+09
## [9393,] -4.396056e+09 -4.968745e+09 -2.307262e+13 -1.152751e+08
## [9394,] -1.628777e+06 -9.417895e+05 -1.145952e+11 -9.230751e+06
```

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## [9395,] -1.058907e+05 -4.342768e+05 -4.905083e+10 -1.022233e+07
## [9396,] -1.154339e+08 -1.090950e+08 -3.050174e+11 -1.838814e+07
## [9397,] -3.298591e+11 -2.687529e+11 -1.826525e+15 -3.719760e+09
## [9398,] -2.188238e+11 -2.575902e+11 -1.383602e+15 -2.383021e+09
## [9399,] -4.493746e+09 -4.396056e+09 -2.307262e+13 -1.066766e+08
## [9400,] -1.155346e+06 -5.575899e+05 -1.145952e+11 -9.072820e+06
## [9401,] -2.187184e+05 -5.732181e+05 -4.905083e+10 -1.012844e+07
## [9402,] -1.203711e+08 -1.116091e+08 -3.050174e+11 -1.828565e+07
## [9403,] -3.494105e+11 -2.884267e+11 -1.826525e+15 -3.027757e+09
## [9404,] -2.510452e+11 -2.180656e+11 -1.383602e+15 -2.335740e+09
## [9405,] -4.836833e+09 -4.258361e+09 -2.307262e+13 -9.861902e+07
## [9406,] -1.187633e+06 -6.745321e+05 -1.145952e+11 -9.135829e+06
## [9407,] -1.752396e+05 -5.013408e+05 -4.905083e+10 -1.018786e+07
## [9408,] -1.201254e+08 -1.017400e+08 -3.051504e+11 -1.807787e+07
## [9409,] -3.255899e+11 -2.687521e+11 -1.827322e+15 -2.956303e+09
## [9410,] -2.518572e+11 -2.257059e+11 -1.384809e+15 -2.136189e+09
## [9411,] -4.327136e+09 -4.258561e+09 -2.309275e+13 -1.071410e+08
## [9412,] -1.283702e+06 -9.388256e+05 -1.146952e+11 -9.172154e+06
## [9413,] -1.765215e+05 -2.635314e+05 -4.909362e+10 -1.020075e+07
## [9414,] -1.243761e+08 -1.066411e+08 -3.052835e+11 -1.813529e+07
## [9415,] -3.472085e+11 -2.785013e+11 -1.828119e+15 -3.079087e+09
## [9416,] -2.203428e+11 -2.257059e+11 -1.384809e+15 -2.527553e+09
## [9417,] -4.807973e+09 -3.602934e+09 -2.309275e+13 -1.043428e+08
## [9418,] -1.334902e+06 -9.388256e+05 -1.146952e+11 -9.199278e+06
## [9419,] -1.526546e+05 -3.163054e+05 -4.909362e+10 -1.021956e+07
## [9420,] -1.131638e+08 -1.167561e+08 -3.052835e+11 -1.831921e+07
## [9421,] -3.450153e+11 -2.884251e+11 -1.828119e+15 -3.027588e+09
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## [9423,] -4.954215e+09 -3.989737e+09 -2.309275e+13 -1.020040e+08
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## [9427,] -3.341534e+11 -2.687513e+11 -1.828119e+15 -3.776631e+09
## [9428,] -2.405862e+11 -1.888120e+11 -1.386017e+15 -2.242310e+09
## [9429,] -4.750300e+09 -3.989931e+09 -2.311289e+13 -1.111089e+08
## [9430,] -1.068659e+06 -4.466506e+05 -1.148452e+11 -9.113854e+06
## [9431,] -2.608551e+05 -5.790180e+05 -4.915784e+10 -1.018719e+07
## [9432,] -1.196683e+08 -1.066885e+08 -3.056828e+11 -1.845175e+07
## [9433,] -3.373911e+11 -2.884226e+11 -1.830510e+15 -3.235929e+09
## [9434,] -2.469935e+11 -2.031735e+11 -1.386621e+15 -2.592991e+09
## [9435,] -4.299941e+09 -4.258860e+09 -2.312296e+13 -1.169363e+08
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## [9439,] -3.483041e+11 -2.784981e+11 -1.831308e+15 -2.835528e+09
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## [9452,] -2.303482e+11 -2.180584e+11 -1.389643e+15 -2.002804e+09
```

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## [9454,] -9.853518e+05 -9.270166e+05 -1.150955e+11 -9.038015e+06
## [9455,] -1.775374e+05 -5.122201e+05 -4.926497e+10 -1.011151e+07
## [9456,] -1.187232e+08 -1.092707e+08 -3.064824e+11 -1.849116e+07
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## [9459,] -4.925864e+09 -4.124035e+09 -2.319353e+13 -1.188708e+08
## [9460,] -1.334478e+06 -1.233095e+06 -1.151957e+11 -9.177783e+06
## [9461,] -2.628728e+05 -2.241696e+05 -4.935076e+10 -1.028771e+07
## [9462,] -1.208690e+08 -1.068306e+08 -3.068825e+11 -1.804025e+07
## [9463,] -3.439105e+11 -2.784916e+11 -1.837694e+15 -4.174959e+09
## [9464,] -2.405787e+11 -2.031673e+11 -1.392063e+15 -2.592291e+09
## [9465,] -4.004131e+09 -4.259758e+09 -2.321371e+13 -1.097297e+08
## [9466,] -1.488462e+06 -1.068279e+06 -1.153461e+11 -9.373456e+06
## [9467,] -2.111517e+05 -4.495150e+05 -4.937222e+10 -1.033357e+07
## [9468,] -1.161957e+08 -1.118514e+08 -3.070160e+11 -1.853806e+07
## [9469,] -3.255768e+11 -2.716469e+11 -1.839292e+15 -3.309611e+09
## [9470,] -2.469852e+11 -2.157874e+11 -1.393273e+15 -2.461663e+09
## [9471,] -4.651095e+09 -3.730985e+09 -2.323390e+13 -1.045615e+08
## [9472,] -1.036112e+06 -2.608707e+05 -1.153962e+11 -9.128587e+06
## [9473,] -2.552191e+05 -1.820736e+05 -4.941516e+10 -1.014868e+07
## [9474,] -1.172630e+08 -1.118837e+08 -3.072829e+11 -1.851001e+07
## [9475,] -3.330636e+11 -2.687394e+11 -1.840092e+15 -3.234886e+09
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## [9477,] -4.766215e+09 -4.260157e+09 -2.325410e+13 -1.039515e+08
## [9478,] -1.206494e+06 -6.521283e+05 -1.154965e+11 -9.232757e+06
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## [9485,] -1.703608e+05 -6.722747e+05 -4.943663e+10 -1.026642e+07
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## [9487,] -3.171203e+11 -2.784868e+11 -1.842491e+15 -2.985199e+09
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## [9490,] -1.608865e+06 -6.496623e+05 -1.155969e+11 -9.196757e+06
## [9491,] -3.272105e+05 -2.292632e+05 -4.950108e+10 -1.020261e+07
## [9492,] -1.132343e+08 -1.094465e+08 -3.079509e+11 -1.859446e+07
## [9493,] -3.417206e+11 -3.087768e+11 -1.844092e+15 -3.171158e+09
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## [9495,] -4.651721e+09 -3.991668e+09 -2.329452e+13 -1.068077e+08
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## [9499,] -3.087759e+11 -2.784844e+11 -1.844892e+15 -3.036085e+09
## [9500,] -2.633674e+11 -2.031604e+11 -1.398122e+15 -2.294944e+09
## [9501,] -4.680632e+09 -4.125311e+09 -2.332486e+13 -1.096865e+08
## [9502,] -1.398430e+06 -5.294251e+05 -1.158480e+11 -9.383715e+06
## [9503,] -1.627151e+05 -5.287581e+05 -4.958707e+10 -1.038592e+07
## [9504,] -1.186956e+08 -9.970627e+07 -3.083520e+11 -1.851113e+07
## [9505,] -3.160672e+11 -2.884062e+11 -1.846493e+15 -3.406022e+09
## [9506,] -2.477852e+11 -2.256892e+11 -1.398728e+15 -2.699911e+09
## [9507,] -5.255932e+09 -3.731918e+09 -2.333498e+13 -1.075210e+08
## [9508,] -1.242481e+06 -9.036229e+05 -1.158983e+11 -9.402113e+06
## [9509,] -3.259703e+05 -3.966567e+05 -4.960858e+10 -1.027730e+07
## [9510,] -1.202819e+08 -1.095104e+08 -3.084857e+11 -1.817940e+07
```

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## [9512,] -2.583941e+11 -2.180470e+11 -1.399335e+15 -2.396941e+09
## [9513,] -4.942071e+09 -3.992055e+09 -2.333498e+13 -1.125713e+08
## [9514,] -1.327003e+06 -4.254593e+05 -1.158983e+11 -9.383827e+06
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## [9522,] -1.131098e+08 -1.146422e+08 -3.090211e+11 -1.852341e+07
## [9523,] -3.266290e+11 -3.087700e+11 -1.850500e+15 -3.170470e+09
## [9524,] -2.461682e+11 -2.575662e+11 -1.402371e+15 -2.134141e+09
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## [9526,] -1.606463e+06 -5.227742e+05 -1.161497e+11 -9.457641e+06
## [9527,] -2.462811e+05 -3.417223e+05 -4.971620e+10 -1.042183e+07
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## [9531,] -4.553247e+09 -3.861366e+09 -2.338561e+13 -1.065173e+08
## [9532,] -1.073847e+06 -2.492936e+05 -1.161497e+11 -9.457641e+06
## [9533,] -2.318904e+05 -5.354469e+05 -4.971620e+10 -1.022323e+07
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## [9545,] -1.806028e+05 -6.132335e+05 -4.978083e+10 -1.036070e+07
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## [9566,] -2.477754e+11 -2.180385e+11 -1.406626e+15 -2.516643e+09
## [9567,] -4.413804e+09 -3.993213e+09 -2.345657e+13 -1.127660e+08
## [9568,] -1.288971e+06 -3.232189e+05 -1.165022e+11 -9.262203e+06
```



```
## [9569,] -3.715415e+05 -2.925315e+05 -4.986707e+10 -1.033933e+07
## [9570,] -1.226108e+08 -1.097184e+08 -3.102273e+11 -1.824376e+07
## [9571,] -3.287544e+11 -3.192059e+11 -1.858527e+15 -3.106957e+09
## [9572,] -2.510146e+11 -2.413555e+11 -1.407844e+15 -2.309339e+09
## [9573,] -4.870259e+09 -4.400110e+09 -2.347687e+13 -1.032284e+08
## [9574,] -6.611438e+05 -1.029155e+06 -1.166030e+11 -9.262427e+06
## [9575,] -3.854942e+05 -3.498100e+05 -4.991022e+10 -1.032393e+07
## [9576,] -1.189454e+08 -1.097344e+08 -3.103614e+11 -1.854799e+07
## [9577,] -3.036044e+11 -3.298240e+11 -1.858527e+15 -3.275419e+09
## [9578,] -2.828509e+11 -2.180363e+11 -1.408452e+15 -2.740944e+09
## [9579,] -4.710997e+09 -3.862315e+09 -2.348702e+13 -1.095043e+08
## [9580,] -1.233570e+06 -4.106380e+05 -1.166534e+11 -9.262538e+06
## [9581,] -2.024510e+05 -4.112258e+05 -4.993180e+10 -1.032568e+07
## [9582,] -1.197465e+08 -1.072575e+08 -3.104956e+11 -1.867849e+07
## [9583,] -3.319676e+11 -2.687204e+11 -1.859330e+15 -3.350432e+09
## [9584,] -2.583824e+11 -2.256775e+11 -1.408452e+15 -2.133435e+09
## [9585,] -4.855874e+09 -3.993600e+09 -2.349717e+13 -1.013539e+08
## [9586,] -9.960607e+05 -5.106900e+05 -1.167038e+11 -9.532424e+06
## [9587,] -2.497669e+05 -6.228451e+05 -4.995338e+10 -1.051749e+07
## [9588,] -1.221320e+08 -1.122882e+08 -3.106299e+11 -1.835551e+07
## [9589,] -3.118740e+11 -2.784683e+11 -1.860938e+15 -3.307238e+09
## [9590,] -2.342334e+11 -2.256761e+11 -1.409670e+15 -2.278040e+09
## [9591,] -4.208159e+09 -4.826851e+09 -2.350733e+13 -1.119594e+08
## [9592,] -1.346936e+06 -2.394726e+05 -1.168047e+11 -9.399564e+06
## [9593,] -2.869050e+05 -6.252597e+05 -4.999657e+10 -1.031835e+07
## [9594,] -1.179701e+08 -1.048402e+08 -3.108984e+11 -1.877082e+07
## [9595,] -3.330398e+11 -2.497403e+11 -1.861742e+15 -2.685586e+09
## [9596,] -2.542733e+11 -2.105246e+11 -1.410279e+15 -2.403542e+09
## [9597,] -4.841511e+09 -4.826957e+09 -2.351748e+13 -1.043570e+08
## [9598,] -1.147212e+06 -4.077052e+05 -1.168047e+11 -9.308326e+06
## [9599,] -2.052109e+05 -5.512176e+05 -5.001817e+10 -1.027917e+07
## [9600,] -1.216542e+08 -1.123368e+08 -3.110327e+11 -1.892292e+07
## [9601,] -3.170979e+11 -2.883890e+11 -1.863351e+15 -2.145759e+09
## [9602,] -2.616877e+11 -2.180327e+11 -1.411498e+15 -2.254652e+09
## [9603,] -4.827169e+09 -4.127373e+09 -2.353781e+13 -1.033216e+08
## [9604,] -5.496755e+05 -5.063308e+05 -1.169056e+11 -9.322207e+06
## [9605,] -1.849016e+05 -4.171270e+05 -5.006138e+10 -1.041841e+07
## [9606,] -1.227462e+08 -1.024504e+08 -3.113014e+11 -1.854253e+07
## [9607,] -3.170971e+11 -2.883881e+11 -1.864155e+15 -3.211119e+09
## [9608,] -2.518227e+11 -2.256732e+11 -1.412107e+15 -2.340112e+09
## [9609,] -4.611583e+09 -3.862885e+09 -2.354797e+13 -1.063377e+08
## [9610,] -7.654154e+05 -5.052439e+05 -1.169561e+11 -9.326874e+06
## [9611,] -3.000180e+05 -4.171270e+05 -5.006138e+10 -1.039626e+07
## [9612,] -1.201090e+08 -1.073525e+08 -3.113014e+11 -1.855284e+07
## [9613,] -3.118706e+11 -2.883881e+11 -1.864155e+15 -3.232279e+09
## [9614,] -2.616869e+11 -2.256732e+11 -1.412107e+15 -2.254579e+09
## [9615,] -4.697268e+09 -3.733879e+09 -2.354797e+13 -1.078541e+08
## [9616,] -1.271678e+06 -8.719448e+05 -1.170066e+11 -9.322431e+06
## [9617,] -1.074179e+05 -5.546268e+05 -5.008299e+10 -1.050269e+07
## [9618,] -1.182966e+08 -1.123854e+08 -3.114358e+11 -1.923565e+07
## [9619,] -3.341119e+11 -2.591384e+11 -1.865765e+15 -2.942196e+09
## [9620,] -2.445466e+11 -1.958962e+11 -1.413937e+15 -2.706359e+09
## [9621,] -4.726321e+09 -4.127765e+09 -2.357848e+13 -1.167746e+08
## [9622,] -1.567956e+06 -4.009031e+05 -1.171581e+11 -9.286368e+06
## [9623,] -1.875395e+05 -5.580465e+05 -5.014786e+10 -1.049529e+07
## [9624,] -1.193902e+08 -1.074159e+08 -3.118392e+11 -1.837343e+07
## [9625,] -3.438774e+11 -2.687125e+11 -1.867376e+15 -3.524377e+09
## [9626,] -2.326598e+11 -2.413473e+11 -1.414547e+15 -2.254289e+09
```

```
## [9627,] -4.915361e+09 -4.541193e+09 -2.358865e+13 -1.008608e+08
## [9628,] -1.249783e+06 -6.120373e+05 -1.171581e+11 -9.469075e+06
## [9629,] -2.184612e+05 -4.210845e+05 -5.014786e+10 -1.050483e+07
## [9630,] -1.207013e+08 -1.049497e+08 -3.118392e+11 -1.895241e+07
## [9631,] -3.449713e+11 -3.087522e+11 -1.867376e+15 -3.447342e+09
## [9632,] -2.700487e+11 -2.031418e+11 -1.414547e+15 -2.572928e+09
## [9633,] -4.640474e+09 -3.994469e+09 -2.358865e+13 -1.031865e+08
## [9634,] -1.150095e+06 -7.329819e+05 -1.172087e+11 -9.414188e+06
## [9635,] -3.432786e+05 -3.607408e+05 -5.016949e+10 -1.040508e+07
## [9636,] -1.170814e+08 -1.099427e+08 -3.121082e+11 -1.844816e+07
## [9637,] -3.298126e+11 -3.087505e+11 -1.868987e+15 -3.033559e+09
## [9638,] -2.534489e+11 -2.180277e+11 -1.415767e+15 -2.507363e+09
## [9639,] -4.857046e+09 -4.263649e+09 -2.360900e+13 -1.079493e+08
## [9640,] -5.865782e+05 -1.164497e+06 -1.172592e+11 -9.150728e+06
## [9641,] -2.683072e+05 -4.892945e+05 -5.019113e+10 -1.031526e+07
## [9642,] -1.181361e+08 -1.176164e+08 -3.122428e+11 -1.880595e+07
## [9643,] -3.341075e+11 -2.883824e+11 -1.869793e+15 -3.327742e+09
## [9644,] -2.445436e+11 -2.180270e+11 -1.416378e+15 -2.507286e+09
## [9645,] -4.871859e+09 -3.734626e+09 -2.362936e+13 -1.047429e+08
## [9646,] -9.040298e+05 -6.072642e+05 -1.173604e+11 -9.373381e+06
## [9647,] -2.167360e+05 -4.914349e+05 -5.023442e+10 -1.046109e+07
## [9648,] -1.142828e+08 -1.150516e+08 -3.123774e+11 -1.897903e+07
## [9649,] -3.298108e+11 -2.784586e+11 -1.870599e+15 -3.446983e+09
## [9650,] -2.429409e+11 -2.256674e+11 -1.416988e+15 -2.572618e+09
## [9651,] -4.683769e+09 -3.863645e+09 -2.362936e+13 -1.121535e+08
## [9652,] -1.241255e+06 -7.277576e+05 -1.174109e+11 -9.405487e+06
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## [9654,] -1.194737e+08 -1.050280e+08 -3.125120e+11 -1.840620e+07
## [9655,] -3.298099e+11 -2.687085e+11 -1.871405e+15 -2.941616e+09
## [9656,] -2.559028e+11 -2.180256e+11 -1.417599e+15 -2.323779e+09
## [9657,] -4.886587e+09 -4.128355e+09 -2.363955e+13 -1.045444e+08
## [9658,] -1.034619e+06 -6.060739e+05 -1.174109e+11 -9.391769e+06
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## [9661,] -3.438729e+11 -2.883808e+11 -1.871405e+15 -3.147284e+09
## [9662,] -2.526305e+11 -1.817944e+11 -1.417599e+15 -2.394697e+09
## [9663,] -4.655265e+09 -4.401732e+09 -2.363955e+13 -1.066957e+08
## [9664,] -1.323977e+06 -4.944393e+05 -1.174615e+11 -9.580235e+06
## [9665,] -2.321259e+05 -6.410683e+05 -5.027772e+10 -1.046463e+07
## [9666,] -1.213288e+08 -1.001952e+08 -3.126467e+11 -1.872214e+07
## [9667,] -3.351831e+11 -2.784570e+11 -1.872211e+15 -3.852024e+09
## [9668,] -2.591945e+11 -2.105148e+11 -1.418821e+15 -1.767291e+09
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## [9670,] -1.154623e+06 -7.238516e+05 -1.175628e+11 -9.424132e+06
## [9671,] -2.431813e+05 -6.435179e+05 -5.032105e+10 -1.040794e+07
## [9672,] -1.253666e+08 -1.026516e+08 -3.130509e+11 -1.850443e+07
## [9673,] -3.362605e+11 -2.687053e+11 -1.874632e+15 -3.209993e+09
## [9674,] -2.365822e+11 -2.493763e+11 -1.420043e+15 -2.269066e+09
## [9675,] -4.613036e+09 -4.264447e+09 -2.369050e+13 -1.122507e+08
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## [9677,] -1.753338e+04 -7.285400e+05 -5.038607e+10 -1.031847e+07
## [9678,] -1.294531e+08 -1.203604e+08 -3.133204e+11 -1.937171e+07
## [9679,] -3.351787e+11 -2.784529e+11 -1.876246e+15 -3.252201e+09
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## [9682,] -1.229365e+06 -3.893753e+05 -1.177653e+11 -9.465840e+06
## [9683,] -2.866922e+05 -5.718304e+05 -5.040775e+10 -1.049113e+07
## [9684,] -1.201147e+08 -1.002870e+08 -3.134553e+11 -1.915783e+07
```

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## [9685,] -3.234114e+11 -2.984708e+11 -1.877861e+15 -3.479081e+09
## [9686,] -2.567164e+11 -2.256594e+11 -1.423713e+15 -2.514497e+09
## [9687,] -4.472468e+09 -4.402746e+09 -2.374151e+13 -1.096851e+08
## [9688,] -1.240846e+06 -5.942345e+05 -1.179174e+11 -9.297138e+06
## [9689,] -2.108990e+05 -6.521283e+05 -5.047283e+10 -1.038865e+07
## [9690,] -1.238659e+08 -1.204275e+08 -3.138599e+11 -1.863677e+07
## [9691,] -3.355327e+11 -3.018711e+11 -3.012924e+13 -1.744681e+09
## [9692,] -2.549336e+11 -1.986432e+11 -2.282305e+13 -1.230552e+09
## [9693,] -4.269548e+09 -3.613041e+09 -3.805918e+11 -2.523954e+07
## [9694,] -1.735905e+07 -1.333578e+07 -1.890292e+09 -1.505340e+04
## [9695,] -7.050485e+06 -5.504709e+06 -8.091123e+08 -5.578888e+04
## [9696,] -6.325045e+07 -5.286643e+07 -5.031380e+09 -9.397794e+05
## [9697,] -3.269505e+11 -2.917167e+11 -3.012924e+13 -1.629848e+09
## [9698,] -2.435947e+11 -2.364416e+11 -2.282305e+13 -1.236249e+09
## [9699,] -4.324435e+09 -3.365775e+09 -3.805918e+11 -2.492503e+07
## [9700,] -1.836763e+07 -1.388604e+07 -1.890292e+09 -1.006469e+04
## [9701,] -6.972545e+06 -5.737315e+06 -8.091123e+08 -5.578888e+04
## [9702,] -6.325045e+07 -4.777489e+07 -5.031380e+09 -9.421010e+05
## [9703,] -3.398655e+11 -2.622957e+11 -3.012924e+13 -1.614832e+09
## [9704,] -2.427946e+11 -2.133677e+11 -2.282305e+13 -1.247684e+09
## [9705,] -3.908232e+09 -3.365775e+09 -3.805918e+11 -2.673331e+07
## [9706,] -1.595911e+07 -1.444743e+07 -1.890292e+09 -1.450948e+04
## [9707,] -6.439092e+06 -5.276916e+06 -8.091123e+08 -5.486579e+04
## [9708,] -5.839846e+07 -6.005609e+07 -5.031380e+09 -9.537515e+05
## [9709,] -3.585899e+11 -2.435503e+11 -3.012924e+13 -1.675312e+09
## [9710,] -2.524822e+11 -2.059397e+11 -2.282305e+13 -1.219196e+09
## [9711,] -4.310781e+09 -3.613133e+09 -3.818853e+11 -2.609567e+07
## [9712,] -1.595301e+07 -1.333020e+07 -1.896716e+09 -1.935320e+04
## [9713,] -6.460128e+06 -5.050502e+06 -8.118621e+08 -5.070942e+04
## [9714,] -6.288247e+07 -6.006793e+07 -5.048478e+09 -1.000205e+06
## [9715,] -3.376948e+11 -2.528354e+11 -3.023163e+13 -1.729080e+09
## [9716,] -2.541144e+11 -2.133670e+11 -2.290062e+13 -1.163154e+09
## [9717,] -4.324536e+09 -3.488403e+09 -3.818853e+11 -2.430947e+07
## [9718,] -1.747718e+07 -1.279117e+07 -1.896716e+09 -1.655753e+04
## [9719,] -6.585418e+06 -5.050502e+06 -8.118621e+08 -5.661635e+04
## [9720,] -6.326261e+07 -4.614537e+07 -5.048478e+09 -9.296877e+05
## [9721,] -3.340960e+11 -2.883717e+11 -1.880285e+15 -3.135894e+09
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## [9724,] -1.124021e+06 -4.826891e+05 -1.180188e+11 -9.352020e+06
## [9725,] -2.803128e+05 -2.649455e+05 -5.051623e+10 -1.046823e+07
## [9726,] -1.194126e+08 -1.101832e+08 -3.141299e+11 -1.898217e+07
## [9727,] -3.405908e+11 -2.784481e+11 -1.881093e+15 -3.467735e+09
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## [9729,] -4.403051e+09 -4.129631e+09 -2.377214e+13 -1.011372e+08
## [9730,] -7.607695e+05 -7.096195e+05 -1.181202e+11 -9.730029e+06
## [9731,] -2.417966e+05 -9.173305e+05 -5.055966e+10 -1.037673e+07
## [9732,] -1.173627e+08 -1.127421e+08 -3.143999e+11 -1.887053e+07
## [9733,] -3.108109e+11 -2.883693e+11 -1.882710e+15 -3.369472e+09
## [9734,] -2.633313e+11 -2.105064e+11 -1.426163e+15 -2.409551e+09
## [9735,] -5.647226e+09 -4.129729e+09 -2.378235e+13 -9.616297e+07
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## [9737,] -2.932759e+05 -3.546352e+05 -5.058138e+10 -1.042913e+07
## [9738,] -1.192013e+08 -1.127583e+08 -3.145350e+11 -1.915896e+07
## [9739,] -3.340925e+11 -2.883685e+11 -1.883519e+15 -2.890052e+09
## [9740,] -2.616681e+11 -2.105057e+11 -1.426775e+15 -2.815486e+09
## [9741,] -5.245747e+09 -4.129828e+09 -2.379257e+13 -1.015895e+08
## [9742,] -1.087829e+06 -4.795090e+05 -1.181710e+11 -9.563364e+06
```

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## [9743,] -2.843730e+05 -6.607959e+05 -5.062484e+10 -1.041366e+07
## [9744,] -1.239850e+08 -1.014018e+08 -3.148052e+11 -1.904680e+07
## [9745,] -3.460472e+11 -2.784441e+11 -1.885137e+15 -3.052438e+09
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## [9747,] -4.197560e+09 -4.685652e+09 -2.381301e+13 -1.111172e+08
## [9748,] -1.023395e+06 -4.773948e+05 -1.182725e+11 -9.430288e+06
## [9749,] -3.056865e+05 -5.834455e+05 -5.062484e+10 -1.048343e+07
## [9750,] -1.221435e+08 -1.102794e+08 -3.149404e+11 -1.903258e+07
## [9751,] -3.128893e+11 -2.883660e+11 -1.885946e+15 -3.850411e+09
## [9752,] -2.526159e+11 -2.031252e+11 -1.429227e+15 -2.214213e+09
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## [9755,] -2.704806e+05 -5.130955e+05 -5.066831e+10 -1.059848e+07
## [9756,] -1.224251e+08 -1.028840e+08 -3.150755e+11 -1.894538e+07
## [9757,] -3.373290e+11 -2.883652e+11 -1.886756e+15 -2.800246e+09
## [9758,] -2.405329e+11 -2.180121e+11 -1.429227e+15 -2.772287e+09
## [9759,] -4.932624e+09 -3.865545e+09 -2.383346e+13 -1.102684e+08
## [9760,] -1.209115e+06 -5.836790e+05 -1.183741e+11 -9.536161e+06
## [9761,] -3.073788e+05 -5.130955e+05 -5.066831e+10 -1.062404e+07
## [9762,] -1.192847e+08 -1.128395e+08 -3.152108e+11 -1.901460e+07
## [9763,] -3.394968e+11 -2.984608e+11 -1.887566e+15 -3.347336e+09
## [9764,] -2.295219e+11 -2.256521e+11 -1.429841e+15 -2.449080e+09
## [9765,] -4.772337e+09 -3.996884e+09 -2.384369e+13 -9.914954e+07
## [9766,] -1.049095e+06 -4.742322e+05 -1.184249e+11 -9.476488e+06
## [9767,] -2.512202e+05 -7.469168e+05 -5.069005e+10 -1.053328e+07
## [9768,] -1.179814e+08 -1.078122e+08 -3.152108e+11 -1.895203e+07
## [9769,] -3.234010e+11 -2.686927e+11 -1.887566e+15 -3.250981e+09
## [9770,] -2.550673e+11 -2.105021e+11 -1.429841e+15 -2.546371e+09
## [9771,] -4.628824e+09 -4.403761e+09 -2.384369e+13 -1.111655e+08
## [9772,] -1.126875e+06 -2.161387e+05 -1.184249e+11 -9.407737e+06
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## [9774,] -1.169603e+08 -1.078281e+08 -3.153460e+11 -1.858540e+07
## [9775,] -3.035733e+11 -2.984599e+11 -1.888375e+15 -3.577547e+09
## [9776,] -2.517997e+11 -2.334238e+11 -1.430454e+15 -2.191228e+09
## [9777,] -4.266044e+09 -4.543871e+09 -2.385392e+13 -1.042307e+08
## [9778,] -1.139499e+06 -6.993577e+05 -1.185265e+11 -9.633477e+06
## [9779,] -2.194051e+05 -5.892969e+05 -5.073356e+10 -1.058785e+07
## [9780,] -1.219467e+08 -1.103436e+08 -3.154813e+11 -1.898619e+07
## [9781,] -3.394941e+11 -2.883619e+11 -1.889996e+15 -2.879384e+09
## [9782,] -2.517981e+11 -2.031225e+11 -1.431682e+15 -2.071265e+09
## [9783,] -4.729368e+09 -3.865925e+09 -2.387438e+13 -1.046898e+08
## [9784,] -1.319619e+06 -5.790180e+05 -1.185773e+11 -9.339573e+06
## [9785,] -6.171065e+04 -4.493101e+05 -5.075531e+10 -1.068563e+07
## [9786,] -1.214523e+08 -1.154618e+08 -3.157519e+11 -1.868784e+07
## [9787,] -3.035708e+11 -2.984574e+11 -1.890806e+15 -3.293281e+09
## [9788,] -2.509839e+11 -1.887615e+11 -1.432295e+15 -2.329835e+09
## [9789,] -4.743880e+09 -4.130712e+09 -2.388462e+13 -1.051343e+08
## [9790,] -9.976476e+05 -2.133061e+05 -1.186282e+11 -9.495316e+06
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## [9796,] -1.058131e+06 -4.700318e+05 -1.186282e+11 -9.312355e+06
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## [9804,] -1.222787e+08 -1.104079e+08 -3.160226e+11 -1.846378e+07
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## [9810,] -1.252242e+08 -1.260290e+08 -3.161580e+11 -1.912402e+07
## [9811,] -3.255184e+11 -3.191688e+11 -1.893238e+15 -3.644200e+09
## [9812,] -2.453238e+11 -2.180056e+11 -1.434752e+15 -2.496878e+09
## [9813,] -4.544592e+09 -4.266743e+09 -2.392559e+13 -1.022127e+08
## [9814,] -1.082670e+06 -2.104921e+05 -1.188316e+11 -9.592537e+06
## [9815,] -4.283751e+05 -2.283860e+05 -5.086417e+10 -1.061771e+07
## [9816,] -1.186350e+08 -1.079392e+08 -3.162935e+11 -1.907840e+07
## [9817,] -3.308567e+11 -2.686863e+11 -1.894049e+15 -3.422537e+09
## [9818,] -2.279635e+11 -2.180049e+11 -1.435367e+15 -2.472541e+09
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## [9821,] -3.507688e+05 -4.565096e+05 -5.090775e+10 -1.061808e+07
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## [9858,] -1.235094e+08 -1.105685e+08 -3.173781e+11 -1.883985e+07
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## [9864,] -1.190458e+08 -1.182637e+08 -3.175138e+11 -1.890888e+07
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## [9870,] -1.203550e+08 -1.056083e+08 -3.175138e+11 -1.890888e+07
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## [9905,] -4.721297e+05 -5.419527e+05 -5.123516e+10 -1.069933e+07
## [9906,] -1.218063e+08 -1.082093e+08 -3.186005e+11 -1.918157e+07
## [9907,] -3.362233e+11 -2.686721e+11 -1.908678e+15 -3.238100e+09
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## [9920,] -2.599861e+11 -2.031060e+11 -1.446451e+15 -2.536113e+09
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## [9932,] -2.240917e+11 -2.256303e+11 -1.448302e+15 -2.659908e+09
## [9933,] -4.906582e+09 -3.999783e+09 -2.415154e+13 -1.072695e+08
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## [9946,] -1.075558e+06 -3.476441e+05 -1.200562e+11 -9.641524e+06
## [9947,] -2.815116e+05 -6.250180e+05 -5.138832e+10 -1.070865e+07
## [9948,] -1.169551e+08 -1.159221e+08 -3.195528e+11 -1.907135e+07
## [9949,] -3.297634e+11 -2.496907e+11 -1.914383e+15 -3.237491e+09
## [9950,] -2.023713e+11 -2.914888e+11 -1.450155e+15 -2.872953e+09
## [9951,] -4.660898e+09 -3.739765e+09 -2.419274e+13 -1.026148e+08
## [9952,] -1.232416e+06 -3.458442e+05 -1.201585e+11 -9.660287e+06
## [9953,] -2.340739e+05 -5.532618e+05 -5.145402e+10 -1.083963e+07
## [9954,] -1.162293e+08 -1.159714e+08 -3.199614e+11 -1.903913e+07
## [9955,] -3.118151e+11 -3.191437e+11 -1.916830e+15 -3.398267e+09
## [9956,] -2.525875e+11 -2.104769e+11 -1.452009e+15 -2.454389e+09
## [9957,] -4.689733e+09 -3.869062e+09 -2.421335e+13 -1.203132e+08
## [9958,] -8.352916e+05 -5.401541e+05 -1.203121e+11 -9.563516e+06
## [9959,] -3.023665e+05 -6.322883e+05 -5.151977e+10 -1.067447e+07
## [9960,] -1.149919e+08 -1.084161e+08 -3.203703e+11 -1.895480e+07
## [9961,] -3.297590e+11 -2.883332e+11 -1.918462e+15 -3.322454e+09
## [9962,] -2.357537e+11 -2.179842e+11 -1.453245e+15 -2.559832e+09
## [9963,] -4.747459e+09 -4.981033e+09 -2.423397e+13 -1.104547e+08
## [9964,] -1.033935e+06 -3.413651e+05 -1.204145e+11 -9.540692e+06
## [9965,] -4.218782e+05 -4.218782e+05 -5.156363e+10 -1.063640e+07
## [9966,] -1.220594e+08 -1.160537e+08 -3.206430e+11 -1.893685e+07
## [9967,] -3.118117e+11 -2.686610e+11 -1.920095e+15 -3.268775e+09
## [9968,] -2.452996e+11 -2.179828e+11 -1.454482e+15 -2.311554e+09
## [9969,] -4.762104e+09 -4.000750e+09 -2.425460e+13 -1.153805e+08
## [9970,] -1.306101e+06 -3.404727e+05 -1.204657e+11 -9.623917e+06
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## [9972,] -1.176058e+08 -1.134898e+08 -3.206430e+11 -1.938734e+07
## [9973,] -3.372926e+11 -2.984274e+11 -1.920095e+15 -3.038525e+09
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## [9976,] -8.571098e+05 -4.320639e+05 -1.205170e+11 -9.637917e+06
## [9977,] -2.290438e+05 -7.165885e+05 -5.158556e+10 -1.076980e+07
## [9978,] -1.268997e+08 -1.084797e+08 -3.209158e+11 -1.930604e+07
## [9979,] -3.170360e+11 -2.883299e+11 -1.921729e+15 -3.834688e+09
## [9980,] -2.566761e+11 -2.030956e+11 -1.455720e+15 -2.303614e+09
## [9981,] -5.327068e+09 -4.134445e+09 -2.427524e+13 -1.006279e+08
## [9982,] -1.782831e+06 -4.310600e+05 -1.205682e+11 -9.385026e+06
## [9983,] -3.069531e+04 -7.178828e+05 -5.160750e+10 -1.058883e+07
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## [9985,] -3.351292e+11 -2.883299e+11 -1.921729e+15 -3.121109e+09
## [9986,] -2.302690e+11 -2.104727e+11 -1.455720e+15 -2.863528e+09
## [9987,] -4.576373e+09 -4.408021e+09 -2.427524e+13 -1.070260e+08
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## [9989,] -2.392782e+05 -6.371586e+05 -5.160750e+10 -1.066559e+07
## [9990,] -1.290656e+08 -1.186796e+08 -3.209158e+11 -1.979279e+07
## [9991,] -3.297555e+11 -2.984257e+11 -1.921729e+15 -3.540449e+09
## [9992,] -2.485226e+11 -2.179814e+11 -1.455720e+15 -2.609006e+09
## [9993,] -4.449813e+09 -4.548096e+09 -2.427524e+13 -1.065933e+08
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## [9995,] -2.392782e+05 -7.178828e+05 -5.160750e+10 -1.076837e+07
## [9996,] -1.252872e+08 -1.060013e+08 -3.209158e+11 -1.899185e+07
## [9997,] -3.233645e+11 -3.191385e+11 -1.921729e+15 -3.152427e+09
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## [10002,] -1.242350e+08 -1.135387e+08 -3.210523e+11 -1.895681e+07
## [10003,] -3.014875e+11 -2.686586e+11 -1.922546e+15 -3.322014e+09
## [10004,] -2.742260e+11 -2.030949e+11 -1.456339e+15 -2.584127e+09
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## [10024,] -1.920351e+07 -1.490054e+07 -9.338970e+08 -5.116790e+02
## [10025,] -7.031182e+06 -7.161867e+06 -3.997412e+08 -1.467116e+04
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## [10028,] -2.381517e+11 -2.287459e+11 -1.133025e+13 -1.032319e+09
## [10029,] -4.265851e+09 -3.472625e+09 -1.889405e+11 -2.260882e+07
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## [10045,] -3.081922e+11 -2.918578e+11 -1.517435e+13 -1.647974e+09
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## [10047,] -4.362395e+09 -3.983861e+09 -1.916821e+11 -2.313127e+07
## [10048,] -1.732926e+07 -1.665297e+07 -9.520305e+08 -5.761283e+01
## [10049,] -7.463710e+06 -5.894318e+06 -4.075030e+08 -1.134719e+04
## [10050,] -6.044257e+07 -5.270653e+07 -2.534014e+09 -7.055187e+05
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## [10052,] -2.532972e+11 -1.986425e+11 -2.290062e+13 -1.202208e+09
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## [10065,] -4.421534e+09 -3.740148e+09 -3.831809e+11 -2.514981e+07
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## [10079,] -6.602764e+06 -5.266390e+06 -8.173755e+08 -5.548177e+04
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## [10081,] -3.191334e+11 -3.297503e+11 -1.926635e+15 -3.353880e+09
## [10082,] -2.469031e+11 -2.030915e+11 -1.459436e+15 -2.675246e+09
## [10083,] -4.806492e+09 -4.270837e+09 -2.434754e+13 -1.019998e+08
## [10084,] -1.240097e+06 -5.267597e+05 -1.209273e+11 -9.564877e+06
## [10085,] -3.579557e+05 -4.987471e+05 -5.178319e+10 -1.067989e+07
## [10086,] -1.224931e+08 -1.061273e+08 -3.220083e+11 -1.930718e+07
## [10087,] -3.118032e+11 -2.784013e+11 -1.928271e+15 -3.246625e+09
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## [10089,] -4.662567e+09 -4.270937e+09 -2.435788e+13 -1.045681e+08
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```

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## [10121,] -4.186484e+05 -5.773911e+05 -5.191515e+10 -1.079352e+07
## [10122,] -1.163338e+08 -1.112284e+08 -3.229657e+11 -1.922807e+07
## [10123,] -3.107572e+11 -2.883176e+11 -1.934005e+15 -3.246016e+09
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## [10125,] -4.381786e+09 -4.135919e+09 -2.443030e+13 -1.092233e+08
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## [10137,] -4.368143e+09 -4.836624e+09 -2.445101e+13 -1.049231e+08
## [10138,] -1.288277e+06 -8.856985e+05 -1.214927e+11 -9.873031e+06
## [10139,] -3.332350e+05 -5.106900e+05 -5.202524e+10 -1.081541e+07
## [10140,] -1.190128e+08 -1.138483e+08 -3.236505e+11 -1.926160e+07
## [10141,] -3.004490e+11 -3.191213e+11 -1.938105e+15 -3.385098e+09
## [10142,] -2.468925e+11 -2.187252e+11 -1.468125e+15 -2.492756e+09
## [10143,] -4.410051e+09 -4.272135e+09 -2.448210e+13 -1.097414e+08
## [10144,] -9.253693e+05 -3.211370e+05 -1.215957e+11 -9.901403e+06
## [10145,] -3.455567e+05 -6.617901e+05 -5.204727e+10 -1.090452e+07
## [10146,] -1.211107e+08 -1.087983e+08 -3.236505e+11 -1.952508e+07
## [10147,] -3.372730e+11 -2.883135e+11 -1.938105e+15 -3.150711e+09
## [10148,] -2.649447e+11 -2.030812e+11 -1.468746e+15 -2.665678e+09
```

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## [10149,] -4.564392e+09 -3.871629e+09 -2.449247e+13 -1.150837e+08
## [10150,] -1.119683e+06 -5.113455e+05 -1.216472e+11 -9.845275e+06
## [10151,] -1.948633e+05 -9.243699e+05 -5.206931e+10 -1.081579e+07
## [10152,] -1.195523e+08 -1.190295e+08 -3.237875e+11 -1.942621e+07
## [10153,] -3.416161e+11 -2.883126e+11 -1.938926e+15 -3.288108e+09
## [10154,] -2.525668e+11 -2.179664e+11 -1.468746e+15 -2.492679e+09
## [10155,] -4.396363e+09 -4.272335e+09 -2.450283e+13 -1.060766e+08
## [10156,] -1.008853e+06 -5.091621e+05 -1.217502e+11 -9.812771e+06
## [10157,] -3.482571e+05 -5.878899e+05 -5.211340e+10 -1.084845e+07
## [10158,] -1.193241e+08 -1.190628e+08 -3.240617e+11 -1.913488e+07
## [10159,] -3.470834e+11 -3.086757e+11 -1.940567e+15 -3.538357e+09
## [10160,] -2.263754e+11 -2.256042e+11 -1.470612e+15 -2.557667e+09
## [10161,] -4.382798e+09 -4.272635e+09 -2.453395e+13 -1.037650e+08
## [10162,] -5.955076e+05 -8.756591e+05 -1.218532e+11 -9.897287e+06
## [10163,] -3.385493e+05 -6.680210e+05 -5.215751e+10 -1.085206e+07
## [10164,] -1.111372e+08 -1.217223e+08 -3.243360e+11 -1.947428e+07
## [10165,] -3.340280e+11 -2.883085e+11 -1.943031e+15 -3.067057e+09
## [10166,] -2.428739e+11 -2.256028e+11 -1.471856e+15 -2.993056e+09
## [10167,] -4.664446e+09 -3.872104e+09 -2.454433e+13 -1.085251e+08
## [10168,] -1.340912e+06 -8.728012e+05 -1.219563e+11 -9.498066e+06
## [10169,] -3.346303e+05 -7.532700e+05 -5.220164e+10 -1.095611e+07
## [10170,] -1.220371e+08 -1.271122e+08 -3.247476e+11 -1.919976e+07
## [10171,] -3.128278e+11 -3.191144e+11 -1.944675e+15 -3.901584e+09
## [10172,] -2.888366e+11 -2.104531e+11 -1.473101e+15 -2.111095e+09
## [10173,] -4.881571e+09 -3.491373e+09 -2.456509e+13 -1.057401e+08
## [10174,] -1.124151e+06 -5.037242e+05 -1.220079e+11 -9.864811e+06
## [10175,] -5.135116e+05 -4.521830e+05 -5.222371e+10 -1.088658e+07
## [10176,] -1.273822e+08 -1.165482e+08 -3.247476e+11 -1.909504e+07
## [10177,] -3.297301e+11 -2.590622e+11 -1.945497e+15 -3.362645e+09
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## [10183,] -3.405186e+11 -2.686348e+11 -1.947141e+15 -2.873646e+09
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## [10187,] -4.311804e+05 -3.933909e+05 -5.233413e+10 -1.078255e+07
## [10188,] -1.176668e+08 -1.166307e+08 -3.254342e+11 -2.004994e+07
## [10189,] -3.394300e+11 -2.983982e+11 -1.948787e+15 -3.394794e+09
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## [10192,] -1.006950e+06 -3.091267e+05 -1.223175e+11 -9.860818e+06
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## [10218,] -1.209036e+08 -1.167297e+08 -3.262592e+11 -1.961118e+07
## [10219,] -3.297213e+11 -2.882979e+11 -1.953727e+15 -3.416013e+09
## [10220,] -2.476848e+11 -2.104454e+11 -1.479958e+15 -2.324158e+09
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## [10225,] -2.953463e+11 -2.686285e+11 -1.953727e+15 -3.201599e+09
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## [10233,] -4.781104e+09 -4.412182e+09 -2.470025e+13 -1.063759e+08
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## [10235,] -3.538348e+05 -6.894244e+05 -5.253318e+10 -1.096379e+07
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## [10292,] -2.460613e+11 -2.333536e+11 -1.489334e+15 -2.307441e+09
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## [10305,] -4.811792e+09 -4.006455e+09 -2.486711e+13 -1.152249e+08
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## [10311,] -4.884882e+09 -4.006649e+09 -2.488800e+13 -1.090511e+08
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## [10313,] -3.185958e+05 -7.124546e+05 -5.293242e+10 -1.091523e+07
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## [10318,] -8.674980e+05 -8.263207e+05 -1.236636e+11 -9.962435e+06
## [10319,] -4.070810e+05 -7.124546e+05 -5.293242e+10 -1.100293e+07
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## [10321,] -3.307740e+11 -2.686119e+11 -1.971065e+15 -3.359898e+09
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## [10327,] -3.243731e+11 -2.783594e+11 -1.971065e+15 -3.349102e+09
## [10328,] -2.699470e+11 -1.958089e+11 -1.493719e+15 -2.206741e+09
## [10329,] -4.826854e+09 -4.006939e+09 -2.491936e+13 -1.141858e+08
## [10330,] -8.926157e+05 -6.937456e+05 -1.237674e+11 -9.882791e+06
## [10331,] -2.621524e+05 -8.905954e+05 -5.297687e+10 -1.101958e+07
## [10332,] -1.191909e+08 -1.171098e+08 -3.294311e+11 -1.953375e+07
## [10333,] -3.547775e+11 -2.983739e+11 -1.972721e+15 -3.043410e+09
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## [10337,] -3.965797e+05 -6.344776e+05 -5.297687e+10 -1.105218e+07
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## [10358,] -2.517168e+11 -2.179336e+11 -1.497483e+15 -2.489171e+09
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## [10383,] -4.201829e+09 -3.869452e+09 -3.857787e+11 -2.999762e+07
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```



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## [10518,] -1.229563e+08 -1.075490e+08 -3.344266e+11 -1.892495e+07
## [10519,] -3.232785e+11 -2.783280e+11 -2.003469e+15 -3.175371e+09
## [10520,] -2.404258e+11 -2.492557e+11 -1.518270e+15 -2.106042e+09
## [10521,] -4.700833e+09 -3.749865e+09 -2.531832e+13 -1.092684e+08
## [10522,] -8.249876e+05 -2.555899e+05 -1.257489e+11 -1.015157e+07
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## [10531,] -3.307380e+11 -2.685794e+11 -2.005138e+15 -3.154227e+09
## [10532,] -2.623828e+11 -2.030261e+11 -1.518903e+15 -2.311786e+09
## [10533,] -4.801941e+09 -4.010713e+09 -2.532886e+13 -1.119261e+08
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## [10709,] -5.292695e+05 -2.668368e+05 -5.483812e+10 -1.149120e+07
## [10710,] -1.304996e+08 -1.184865e+08 -3.410051e+11 -2.111962e+07
## [10711,] -3.163757e+11 -2.917134e+11 -3.053985e+13 -1.659839e+09
## [10712,] -2.419929e+11 -2.364386e+11 -2.313410e+13 -1.218982e+09
## [10713,] -4.174735e+09 -3.488674e+09 -3.857787e+11 -2.569292e+07
## [10714,] -1.623380e+07 -1.617376e+07 -1.916054e+09 -1.543980e+04
## [10715,] -6.725460e+06 -5.490376e+06 -8.201393e+08 -5.771248e+04
## [10716,] -6.521751e+07 -4.948642e+07 -5.099949e+09 -9.480438e+05
## [10717,] -3.453170e+11 -2.528331e+11 -3.053985e+13 -1.629601e+09
## [10718,] -2.590427e+11 -1.844424e+11 -2.313410e+13 -1.224653e+09
## [10719,] -4.311082e+09 -3.488674e+09 -3.857787e+11 -2.537559e+07
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## [10722,] -6.368048e+07 -4.781715e+07 -5.099949e+09 -9.480438e+05
## [10723,] -3.508155e+11 -2.528331e+11 -3.053985e+13 -1.599642e+09
## [10724,] -2.532949e+11 -2.286158e+11 -2.313410e+13 -1.213325e+09
## [10725,] -4.352413e+09 -3.613409e+09 -3.857787e+11 -2.506024e+07
## [10726,] -1.796016e+07 -1.557945e+07 -1.916054e+09 -1.734853e+04
## [10727,] -7.191263e+06 -5.490376e+06 -8.201393e+08 -5.794842e+04
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## [10899,] -4.496211e+09 -4.426304e+09 -2.616858e+13 -1.127620e+08
## [10900,] -9.926471e+05 -2.693690e+05 -1.299719e+11 -1.058363e+07
## [10901,] -4.767614e+05 -6.218806e+05 -5.563262e+10 -1.168330e+07
## [10902,] -1.243669e+08 -1.164888e+08 -3.460873e+11 -2.025954e+07
```

```
## [10903,] -3.168802e+11 -2.782618e+11 -2.072462e+15 -3.658043e+09
## [10904,] -2.500037e+11 -2.029703e+11 -1.570544e+15 -2.305838e+09
## [10905,] -4.274736e+09 -4.566976e+09 -2.620074e+13 -1.202670e+08
## [10906,] -7.012505e+05 -4.769957e+04 -1.301317e+11 -1.055005e+07
## [10907,] -7.220843e+05 -4.799324e+05 -5.570099e+10 -1.161522e+07
## [10908,] -1.322625e+08 -1.089003e+08 -3.463707e+11 -2.011198e+07
## [10909,] -3.557783e+11 -2.881797e+11 -2.074160e+15 -2.971934e+09
## [10910,] -2.516264e+11 -2.103430e+11 -1.572473e+15 -1.827069e+09
## [10911,] -4.357550e+09 -4.152743e+09 -2.623292e+13 -1.128594e+08
## [10912,] -8.687511e+05 -4.403405e+05 -1.302915e+11 -1.060863e+07
## [10913,] -6.929311e+05 -7.944048e+05 -5.576940e+10 -1.158072e+07
## [10914,] -1.186476e+08 -1.165713e+08 -3.467961e+11 -2.026162e+07
## [10915,] -3.403804e+11 -2.782578e+11 -2.076707e+15 -3.002246e+09
## [10916,] -2.301326e+11 -2.411574e+11 -1.573116e+15 -2.770944e+09
## [10917,] -4.567286e+09 -4.018944e+09 -2.623292e+13 -1.113081e+08
## [10918,] -8.140303e+05 -1.934626e+05 -1.302915e+11 -1.051652e+07
## [10919,] -4.628716e+05 -7.093621e+05 -5.576940e+10 -1.179876e+07
## [10920,] -1.215494e+08 -1.089641e+08 -3.469380e+11 -2.045208e+07
## [10921,] -3.210861e+11 -2.782570e+11 -2.077557e+15 -3.337879e+09
## [10922,] -2.435526e+11 -2.254859e+11 -1.573760e+15 -2.669333e+09
## [10923,] -4.869412e+09 -5.611465e+09 -2.625438e+13 -1.071832e+08
## [10924,] -8.383672e+05 -2.630609e+05 -1.303981e+11 -1.057974e+07
## [10925,] -5.129642e+05 -9.819566e+05 -5.581502e+10 -1.166138e+07
## [10926,] -1.205130e+08 -1.271708e+08 -3.470798e+11 -2.020001e+07
## [10927,] -3.232011e+11 -2.685105e+11 -2.078406e+15 -3.294854e+09
## [10928,] -2.491886e+11 -1.957230e+11 -1.574403e+15 -2.407774e+09
## [10929,] -4.738835e+09 -4.152940e+09 -2.625438e+13 -1.048126e+08
## [10930,] -8.924424e+05 -2.622776e+05 -1.304514e+11 -1.086804e+07
## [10931,] -4.096201e+05 -9.865051e+05 -5.588350e+10 -1.171731e+07
## [10932,] -1.269699e+08 -1.166703e+08 -3.476477e+11 -2.074746e+07
## [10933,] -3.126868e+11 -2.589346e+11 -2.082657e+15 -3.522920e+09
## [10934,] -2.491848e+11 -2.029627e+11 -1.577623e+15 -2.536445e+09
## [10935,] -4.725066e+09 -4.153531e+09 -2.631882e+13 -1.036240e+08
## [10936,] -8.852383e+05 -5.358943e+05 -1.307181e+11 -1.080481e+07
## [10937,] -2.214716e+05 -7.196968e+05 -5.595202e+10 -1.156223e+07
## [10938,] -1.180162e+08 -1.246056e+08 -3.480738e+11 -2.038837e+07
## [10939,] -3.189702e+11 -3.189702e+11 -2.084358e+15 -3.167109e+09
## [10940,] -2.598224e+11 -2.254801e+11 -1.578912e+15 -2.304884e+09
## [10941,] -4.943474e+09 -4.153629e+09 -2.632957e+13 -1.070773e+08
## [10942,] -5.025535e+05 -6.494160e+05 -1.307715e+11 -1.062428e+07
## [10943,] -3.825961e+05 -8.972421e+05 -5.597487e+10 -1.177861e+07
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## [10945,] -3.458315e+11 -2.982629e+11 -2.084358e+15 -3.011713e+09
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## [10948,] -7.491374e+05 -1.874601e+05 -1.307715e+11 -1.080984e+07
## [10949,] -4.391649e+05 -9.925862e+05 -5.597487e+10 -1.172816e+07
## [10950,] -1.217011e+08 -1.116220e+08 -3.482159e+11 -2.049266e+07
## [10951,] -3.106031e+11 -2.982621e+11 -2.085209e+15 -3.337084e+09
## [10952,] -2.491825e+11 -2.029607e+11 -1.579557e+15 -2.343918e+09
## [10953,] -4.441871e+09 -5.151780e+09 -2.634032e+13 -1.103671e+08
## [10954,] -7.222402e+05 -4.302576e+05 -1.308249e+11 -1.060982e+07
## [10955,] -5.217581e+05 -8.986903e+05 -5.599772e+10 -1.172331e+07
## [10956,] -1.146768e+08 -1.167363e+08 -3.482159e+11 -2.066637e+07
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## [10959,] -4.497954e+09 -4.855774e+09 -2.635107e+13 -1.121496e+08
## [10960,] -3.716906e+05 -3.362058e+05 -1.309317e+11 -1.067819e+07
```



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## [10961,] -5.898367e+05 -6.437631e+05 -5.604345e+10 -1.182133e+07
## [10962,] -1.089058e+08 -1.300757e+08 -3.486425e+11 -2.117996e+07
## [10963,] -3.253144e+11 -3.189667e+11 -2.087764e+15 -3.326061e+09
## [10964,] -2.581681e+11 -2.178394e+11 -1.581492e+15 -2.328014e+09
## [10965,] -4.372692e+09 -4.154023e+09 -2.637258e+13 -1.164340e+08
## [10966,] -6.796629e+05 -5.292028e+05 -1.310386e+11 -1.095807e+07
## [10967,] -5.771821e+05 -5.697521e+05 -5.608919e+10 -1.176444e+07
## [10968,] -1.233752e+08 -1.168189e+08 -3.489269e+11 -2.063584e+07
## [10969,] -3.147672e+11 -2.881641e+11 -2.090319e+15 -3.315056e+09
## [10970,] -2.224041e+11 -2.178373e+11 -1.583428e+15 -2.519439e+09
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## [10972,] -4.845596e+05 -5.269816e+05 -1.311455e+11 -1.045563e+07
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## [10974,] -1.260822e+08 -1.168519e+08 -3.492116e+11 -2.042197e+07
## [10975,] -3.371089e+11 -2.881617e+11 -2.092876e+15 -3.103630e+09
## [10976,] -2.664723e+11 -2.332422e+11 -1.585365e+15 -2.242271e+09
## [10977,] -4.304357e+09 -4.569249e+09 -2.643717e+13 -1.113936e+08
## [10978,] -4.813734e+05 -1.044405e+06 -1.313059e+11 -1.065467e+07
## [10979,] -4.965693e+05 -1.214498e+06 -5.620362e+10 -1.178055e+07
## [10980,] -1.255795e+08 -1.194868e+08 -3.494963e+11 -2.031695e+07
## [10981,] -3.253074e+11 -2.589237e+11 -2.094582e+15 -3.422799e+09
## [10982,] -2.379654e+11 -2.254714e+11 -1.586657e+15 -2.584617e+09
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## [10989,] -4.359769e+09 -4.712157e+09 -2.646949e+13 -1.127718e+08
## [10990,] -7.067387e+05 -1.214204e+05 -1.314665e+11 -1.067452e+07
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## [10992,] -1.272628e+08 -1.143772e+08 -3.500661e+11 -2.080043e+07
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## [10998,] -1.256652e+08 -1.093314e+08 -3.502086e+11 -2.021129e+07
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## [11001,] -4.945086e+09 -4.569765e+09 -2.649105e+13 -1.150385e+08
## [11002,] -7.422221e+05 -1.203577e+05 -1.315736e+11 -1.050970e+07
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## [11004,] -1.264713e+08 -1.143936e+08 -3.502086e+11 -2.077466e+07
## [11005,] -3.635778e+11 -2.881568e+11 -2.097996e+15 -3.357326e+09
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## [11007,] -4.871865e+09 -4.857265e+09 -2.650183e+13 -1.152796e+08
## [11008,] -6.298602e+05 -6.298602e+05 -1.316271e+11 -1.078726e+07
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## [11013,] -4.655272e+09 -4.021463e+09 -2.651262e+13 -1.097452e+08
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## [11017,] -3.317131e+11 -2.782369e+11 -2.098849e+15 -3.477092e+09
## [11018,] -2.403418e+11 -2.332370e+11 -1.589889e+15 -1.610245e+09
```

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## [11019,] -4.485461e+09 -4.569972e+09 -2.651262e+13 -1.086515e+08
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## [11021,] -3.335880e+05 -6.610444e+05 -5.636402e+10 -1.180044e+07
## [11022,] -1.238282e+08 -1.093633e+08 -3.504937e+11 -2.073407e+07
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## [11024,] -2.740572e+11 -2.103241e+11 -1.589889e+15 -2.751806e+09
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## [11026,] -5.375962e+05 -1.763802e+05 -1.316807e+11 -1.054866e+07
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## [11028,] -1.262710e+08 -1.020146e+08 -3.507790e+11 -2.049801e+07
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## [11044,] -1.744525e+07 -1.441260e+07 -1.929000e+09 -2.421545e+04
## [11045,] -6.465645e+06 -5.715372e+06 -8.256807e+08 -6.578155e+04
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## [11069,] -6.866975e+06 -5.479638e+06 -8.284585e+08 -5.623084e+04
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## [11071,] -3.284959e+11 -2.684875e+11 -2.103121e+15 -3.186226e+09
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## [11073,] -4.799826e+09 -4.022045e+09 -2.657738e+13 -1.039977e+08
## [11074,] -8.373600e+05 -2.400713e+05 -1.320023e+11 -1.067571e+07
## [11075,] -4.627677e+05 -1.027915e+06 -5.650169e+10 -1.196395e+07
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```

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## [11089,] -3.327779e+11 -2.684828e+11 -2.108253e+15 -3.498115e+09
## [11090,] -2.639509e+11 -1.816081e+11 -1.597661e+15 -2.279460e+09
## [11091,] -4.009361e+09 -4.571212e+09 -2.664221e+13 -1.150435e+08
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## [11102,] -2.475419e+11 -2.029393e+11 -1.599606e+15 -2.157001e+09
## [11103,] -4.946913e+09 -3.634468e+09 -2.667466e+13 -1.180306e+08
## [11104,] -8.370244e+05 -3.101472e+05 -1.325392e+11 -1.084818e+07
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## [11108,] -2.483489e+11 -2.178187e+11 -1.600255e+15 -2.388890e+09
## [11109,] -4.902950e+09 -4.023014e+09 -2.668548e+13 -1.097821e+08
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## [11115,] -4.772343e+09 -4.293338e+09 -2.672878e+13 -1.085338e+08
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## [11279,] -6.375978e+05 -6.533630e+05 -5.770186e+10 -1.190970e+07
## [11280,] -1.261570e+08 -1.102923e+08 -3.588129e+11 -2.139350e+07
## [11281,] -3.381342e+11 -2.494777e+11 -2.148667e+15 -3.527000e+09
## [11282,] -2.491260e+11 -2.254257e+11 -1.627626e+15 -2.385754e+09
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## [11284,] -4.849001e+05 -2.027124e+05 -1.348062e+11 -1.092709e+07
## [11285,] -5.481809e+05 -8.229899e+05 -5.772506e+10 -1.213613e+07
## [11286,] -1.171995e+08 -1.179780e+08 -3.589572e+11 -2.097096e+07
## [11287,] -3.273812e+11 -2.684448e+11 -2.149531e+15 -3.244965e+09
## [11288,] -2.246546e+11 -2.410928e+11 -1.628935e+15 -2.789677e+09
## [11289,] -4.762216e+09 -4.297445e+09 -2.717466e+13 -1.035745e+08
## [11290,] -7.884769e+05 -2.006534e+05 -1.349689e+11 -1.109077e+07
## [11291,] -4.800594e+05 -1.013709e+06 -5.777148e+10 -1.199679e+07
## [11292,] -1.216791e+08 -1.206254e+08 -3.592459e+11 -2.103981e+07
## [11293,] -3.327338e+11 -2.588724e+11 -2.151260e+15 -3.149934e+09
## [11294,] -2.387075e+11 -2.331912e+11 -1.630245e+15 -2.433235e+09
## [11295,] -4.380275e+09 -4.297545e+09 -2.718558e+13 -1.118443e+08
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## [11301,] -4.719293e+09 -4.436070e+09 -2.720743e+13 -1.314879e+08
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## [11469,] -4.823888e+09 -4.030772e+09 -2.755821e+13 -1.164245e+08
## [11470,] -6.305882e+05 -7.400715e+04 -1.368738e+11 -1.103551e+07
## [11471,] -6.148862e+05 -8.765174e+05 -5.861026e+10 -1.237723e+07
## [11472,] -1.260201e+08 -1.059353e+08 -3.644617e+11 -2.119365e+07
## [11473,] -3.178201e+11 -2.684147e+11 -2.182493e+15 -2.961446e+09
## [11474,] -2.499067e+11 -2.028829e+11 -1.653250e+15 -2.121192e+09
## [11475,] -4.722759e+09 -3.642027e+09 -2.756921e+13 -1.064982e+08
## [11476,] -1.004314e+06 -2.450388e+05 -1.369285e+11 -1.132991e+07
## [11477,] -5.560162e+05 -1.071441e+06 -5.863364e+10 -1.232743e+07
## [11478,] -1.188871e+08 -1.186263e+08 -3.646071e+11 -2.158813e+07
## [11479,] -3.105060e+11 -2.880755e+11 -2.183364e+15 -3.446346e+09
## [11480,] -2.466723e+11 -2.102554e+11 -1.653910e+15 -2.188901e+09
## [11481,] -4.708489e+09 -4.030966e+09 -2.758021e+13 -1.122050e+08
## [11482,] -7.780353e+05 -1.761236e+05 -1.369831e+11 -1.110026e+07
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## [11483,] -5.868357e+05 -9.737958e+05 -5.865703e+10 -1.220564e+07
## [11484,] -1.268618e+08 -1.160504e+08 -3.647526e+11 -2.169544e+07
## [11485,] -2.880747e+11 -3.294827e+11 -2.184235e+15 -3.512224e+09
## [11486,] -2.482850e+11 -2.102540e+11 -1.655229e+15 -2.617804e+09
## [11487,] -4.315093e+09 -4.580309e+09 -2.760222e+13 -1.231346e+08
## [11488,] -5.349103e+05 -7.235352e+04 -1.370924e+11 -1.114030e+07
## [11489,] -5.955547e+05 -1.287652e+06 -5.868043e+10 -1.237265e+07
## [11490,] -1.276890e+08 -1.160669e+08 -3.648980e+11 -2.146906e+07
## [11491,] -3.209770e+11 -2.981645e+11 -2.185978e+15 -3.457028e+09
## [11492,] -2.410621e+11 -2.177581e+11 -1.655889e+15 -2.543555e+09
## [11493,] -4.566256e+09 -4.301453e+09 -2.761322e+13 -1.147065e+08
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## [11495,] -5.103406e+05 -1.182044e+06 -5.872723e+10 -1.221480e+07
## [11496,] -1.207880e+08 -1.135354e+08 -3.651891e+11 -2.142779e+07
## [11497,] -3.479200e+11 -2.684107e+11 -2.186849e+15 -3.053020e+09
## [11498,] -2.450604e+11 -2.102526e+11 -1.656550e+15 -2.584552e+09
## [11499,] -4.766647e+09 -4.031452e+09 -2.763524e+13 -1.185827e+08
## [11500,] -6.104124e+05 -2.405208e+05 -1.372564e+11 -1.126047e+07
## [11501,] -8.216872e+05 -9.798376e+05 -5.875064e+10 -1.233015e+07
## [11502,] -1.239820e+08 -1.110157e+08 -3.653347e+11 -2.048172e+07
## [11503,] -3.262772e+11 -2.684099e+11 -2.187721e+15 -2.457006e+09
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## [11506,] -6.934401e+05 -2.397719e+05 -1.373111e+11 -1.128062e+07
## [11507,] -7.619430e+05 -8.865617e+05 -5.877405e+10 -1.237690e+07
## [11508,] -1.280288e+08 -1.110318e+08 -3.654803e+11 -2.117680e+07
## [11509,] -3.125817e+11 -2.880706e+11 -2.188593e+15 -3.219860e+09
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## [11515,] -3.316207e+11 -2.684083e+11 -2.189465e+15 -4.002716e+09
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## [11519,] -5.886870e+05 -1.085726e+06 -5.884432e+10 -1.249687e+07
## [11520,] -1.283690e+08 -1.110962e+08 -3.660629e+11 -2.121596e+07
## [11521,] -3.435298e+11 -3.188615e+11 -2.192955e+15 -3.380025e+09
## [11522,] -2.597235e+11 -2.028739e+11 -1.661836e+15 -2.241486e+09
## [11523,] -4.709747e+09 -4.302355e+09 -2.771238e+13 -1.110718e+08
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## [11525,] -8.061624e+05 -8.966631e+05 -5.893808e+10 -1.266821e+07
## [11526,] -1.265294e+08 -1.162481e+08 -3.665002e+11 -2.148042e+07
## [11527,] -3.316155e+11 -2.880649e+11 -2.194701e+15 -3.827209e+09
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## [11557,] -3.391665e+11 -2.981511e+11 -2.199943e+15 -3.271826e+09
## [11558,] -2.434455e+11 -2.253829e+11 -1.666468e+15 -2.501586e+09
## [11559,] -4.782695e+09 -3.771421e+09 -2.780067e+13 -1.176942e+08
## [11560,] -3.579557e+05 -2.294096e+05 -1.380781e+11 -1.124731e+07
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## [11564,] -2.402527e+11 -2.253814e+11 -1.667793e+15 -2.477150e+09
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## [11570,] -2.394567e+11 -2.253800e+11 -1.669118e+15 -2.699801e+09
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## [11581,] -3.623397e+11 -2.981453e+11 -2.206066e+15 -3.228709e+09
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## [11587,] -3.209571e+11 -2.880542e+11 -2.206066e+15 -3.102861e+09
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## [11589,] -4.929307e+09 -4.033587e+09 -2.787804e+13 -1.095537e+08
## [11590,] -9.185019e+05 -1.052749e+05 -1.384624e+11 -1.123816e+07
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## [11598,] -1.284441e+08 -1.217527e+08 -3.689832e+11 -2.161212e+07
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## [11639,] -9.894217e+05 -7.519442e+05 -5.950219e+10 -1.253371e+07
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## [11645,] -5.420202e+05 -1.240914e+06 -5.954932e+10 -1.248900e+07
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## [11849,] -8.555824e+05 -1.107812e+06 -6.068605e+10 -1.287250e+07
## [11850,] -1.237955e+08 -1.174872e+08 -3.775178e+11 -2.195882e+07
## [11851,] -3.062907e+11 -3.083574e+11 -2.260677e+15 -2.933821e+09
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## [11854,] -5.260944e+05 -7.720052e+04 -1.418336e+11 -1.157822e+07
## [11855,] -7.261679e+05 -1.109421e+06 -6.070985e+10 -1.277958e+07
## [11856,] -1.286524e+08 -1.175038e+08 -3.776658e+11 -2.189874e+07
## [11857,] -3.093925e+11 -2.683434e+11 -2.261563e+15 -4.030214e+09
## [11858,] -2.362419e+11 -2.253314e+11 -1.713817e+15 -2.439746e+09
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## [11861,] -8.703757e+05 -9.167451e+05 -6.078126e+10 -1.282407e+07
## [11862,] -1.276034e+08 -1.073874e+08 -3.779619e+11 -2.191304e+07
## [11863,] -3.001299e+11 -3.083549e+11 -2.263336e+15 -3.340523e+09
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## [11888,] -2.629730e+11 -2.330916e+11 -1.719866e+15 -2.242873e+09
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## [11903,] -7.079212e+05 -1.357599e+06 -6.113897e+10 -1.282887e+07
## [11904,] -1.259751e+08 -1.152025e+08 -3.801863e+11 -2.235870e+07
## [11905,] -3.390882e+11 -2.780716e+11 -2.277546e+15 -3.013553e+09
## [11906,] -2.473974e+11 -2.176839e+11 -1.725253e+15 -2.769441e+09
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## [12040,] -1.627545e+07 -1.497852e+07 -1.935490e+09 -1.400593e+04
## [12041,] -6.944325e+06 -5.029916e+06 -8.284585e+08 -5.693096e+04
## [12042,] -6.429147e+07 -5.121714e+07 -5.151682e+09 -1.036019e+06
## [12043,] -3.464105e+11 -2.528308e+11 -3.084964e+13 -1.854923e+09
## [12044,] -2.532926e+11 -1.986384e+11 -2.336876e+13 -1.276119e+09
## [12045,] -4.463900e+09 -3.869737e+09 -3.896919e+11 -2.821563e+07
## [12046,] -1.750121e+07 -1.497852e+07 -1.935490e+09 -1.563942e+04
## [12047,] -7.022108e+06 -5.252370e+06 -8.284585e+08 -5.716530e+04
## [12048,] -5.648435e+07 -5.829737e+07 -5.151682e+09 -1.002196e+06
## [12049,] -3.333706e+11 -2.528308e+11 -3.084964e+13 -1.697838e+09
## [12050,] -2.492266e+11 -2.059348e+11 -2.336876e+13 -1.406804e+09
## [12051,] -4.422042e+09 -3.488944e+09 -3.896919e+11 -2.592891e+07
## [12052,] -1.756366e+07 -1.329674e+07 -1.935490e+09 -1.526864e+04
## [12053,] -6.713575e+06 -5.711719e+06 -8.284585e+08 -5.599843e+04
## [12054,] -6.125776e+07 -5.469998e+07 -5.151682e+09 -9.760139e+05
## [12055,] -3.153256e+11 -2.528308e+11 -3.084964e+13 -1.744234e+09
## [12056,] -2.484173e+11 -2.364364e+11 -2.336876e+13 -1.270330e+09
## [12057,] -4.001146e+09 -3.869832e+09 -3.910007e+11 -2.263745e+07
## [12058,] -1.812426e+07 -1.275293e+07 -1.941990e+09 -2.376480e+04
## [12059,] -6.162140e+06 -5.944887e+06 -8.312409e+08 -6.455812e+04
## [12060,] -6.392047e+07 -5.471128e+07 -5.168984e+09 -8.919343e+05
## [12061,] -3.229735e+11 -2.683031e+11 -2.306993e+15 -2.511758e+09
## [12062,] -2.522374e+11 -1.884376e+11 -1.747560e+15 -2.309543e+09
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## [12064,] -2.642537e+05 -2.877570e+05 -1.447395e+11 -1.181942e+07
## [12065,] -1.009467e+06 -1.194706e+06 -6.195367e+10 -1.306171e+07
## [12066,] -1.279088e+08 -1.183502e+08 -3.852524e+11 -2.227629e+07
## [12067,] -3.282919e+11 -3.293607e+11 -2.306993e+15 -2.919438e+09
## [12068,] -2.506104e+11 -2.176604e+11 -1.747560e+15 -2.623618e+09
## [12069,] -4.766544e+09 -4.044659e+09 -2.915320e+13 -1.153969e+08
## [12070,] -3.455926e+05 -2.126008e+05 -1.447957e+11 -1.193779e+07
## [12071,] -7.880970e+05 -1.420638e+06 -6.197771e+10 -1.319879e+07
## [12072,] -1.260554e+08 -1.210017e+08 -3.855514e+11 -2.271076e+07
## [12073,] -3.304296e+11 -2.683015e+11 -2.308784e+15 -3.186996e+09
## [12074,] -2.385746e+11 -2.330599e+11 -1.748916e+15 -2.957544e+09
## [12075,] -4.709121e+09 -4.315497e+09 -2.917583e+13 -1.385219e+08
## [12076,] -4.457114e+05 -7.381996e+03 -1.449643e+11 -1.195879e+07
## [12077,] -8.097340e+05 -1.311346e+06 -6.204987e+10 -1.307317e+07
## [12078,] -1.301531e+08 -1.184167e+08 -3.858506e+11 -2.260000e+07
## [12079,] -3.219116e+11 -2.682999e+11 -2.310576e+15 -3.814834e+09
## [12080,] -2.377806e+11 -1.884343e+11 -1.750952e+15 -2.293610e+09
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## [12082,] -4.648076e+05 -5.489443e+04 -1.450205e+11 -1.194345e+07
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## [12084,] -1.310084e+08 -1.184499e+08 -3.861499e+11 -2.185842e+07
## [12085,] -3.325725e+11 -2.780402e+11 -2.312368e+15 -2.878799e+09
## [12086,] -2.696327e+11 -2.176554e+11 -1.752310e+15 -2.193573e+09
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## [12088,] -2.293218e+05 -1.458652e+05 -1.451330e+11 -1.188707e+07
## [12089,] -7.702096e+05 -8.138649e+05 -6.212207e+10 -1.300116e+07
## [12090,] -1.288782e+08 -1.133466e+08 -3.865990e+11 -2.275035e+07
## [12091,] -3.444993e+11 -2.879533e+11 -2.315057e+15 -3.144444e+09
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## [12123,] -4.724547e+09 -4.316501e+09 -2.928909e+13 -1.095973e+08
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## [12135,] -4.681899e+09 -3.784290e+09 -2.933445e+13 -1.225120e+08
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## [12167,] -9.058616e+05 -1.846733e+06 -6.260448e+10 -1.323624e+07
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## [12174,] -1.270409e+08 -1.086103e+08 -3.894496e+11 -2.239936e+07
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## [12177,] -4.827501e+09 -4.181649e+09 -2.947076e+13 -1.145091e+08
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## [12181,] -3.368658e+11 -2.682801e+11 -2.333028e+15 -3.258726e+09
## [12182,] -2.497768e+11 -2.176397e+11 -1.767281e+15 -2.663044e+09
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## [12202,] -4.835389e+05 -3.779520e+03 -1.467686e+11 -1.195769e+07
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## [12230,] -2.457286e+11 -2.409270e+11 -1.776841e+15 -2.221478e+09
## [12231,] -4.684619e+09 -4.048742e+09 -2.963018e+13 -1.163131e+08
## [12232,] -2.174195e+05 -4.260576e+05 -1.471647e+11 -1.216059e+07
## [12233,] -1.359309e+06 -1.750007e+06 -6.301599e+10 -1.328798e+07
## [12234,] -1.377851e+08 -1.190828e+08 -3.918583e+11 -2.272011e+07
## [12235,] -3.051789e+11 -3.082759e+11 -2.346551e+15 -3.289411e+09
## [12236,] -2.587636e+11 -2.176290e+11 -1.777525e+15 -2.306312e+09
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## [12238,] -4.947832e+05 -1.245287e+05 -1.472780e+11 -1.223378e+07
## [12239,] -8.309394e+05 -1.384081e+06 -6.304024e+10 -1.337237e+07
## [12240,] -1.286878e+08 -1.113928e+08 -3.920091e+11 -2.275022e+07
## [12241,] -3.197636e+11 -2.682666e+11 -2.348358e+15 -3.225407e+09
## [12242,] -2.361706e+11 -2.176276e+11 -1.778893e+15 -2.353148e+09
## [12243,] -4.843970e+09 -4.183428e+09 -2.967581e+13 -1.066550e+08
## [12244,] -2.964793e+05 -3.298559e+05 -1.474480e+11 -1.233349e+07
## [12245,] -8.172877e+05 -1.276232e+06 -6.311301e+10 -1.341428e+07
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## [12250,] -2.264328e+05 -3.996450e+04 -1.475614e+11 -1.210434e+07
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## [12252,] -1.244657e+08 -1.191829e+08 -3.927634e+11 -2.264979e+07
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## [12255,] -4.361794e+09 -4.320418e+09 -2.973290e+13 -1.178209e+08
## [12256,] -3.703501e+05 -2.426723e+03 -1.476749e+11 -1.207348e+07
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## [12260,] -2.338061e+11 -2.252566e+11 -1.783686e+15 -2.813927e+09
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```



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## [12394,] -4.012515e+05 -6.405587e+04 -1.491536e+11 -1.229548e+07
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## [12403,] -2.939281e+11 -3.292914e+11 -2.378258e+15 -3.286344e+09
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## [12420,] -1.277367e+08 -1.223842e+08 -3.979124e+11 -2.286342e+07
## [12421,] -3.325038e+11 -2.586695e+11 -2.382805e+15 -3.285906e+09
## [12422,] -2.465016e+11 -2.100978e+11 -1.805676e+15 -2.249124e+09
## [12423,] -4.746524e+09 -3.790685e+09 -3.011103e+13 -1.143050e+08
## [12424,] -1.220231e+06 -1.569235e+05 -1.496101e+11 -1.196404e+07
## [12425,] -9.742482e+05 -1.705413e+06 -6.403845e+10 -1.355909e+07
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## [12427,] -3.144800e+11 -3.400675e+11 -2.385535e+15 -3.169165e+09
## [12428,] -2.175984e+11 -2.329972e+11 -1.807055e+15 -2.518171e+09
## [12429,] -4.617824e+09 -4.053022e+09 -3.013403e+13 -1.186301e+08
## [12430,] -3.560929e+05 -2.946036e+04 -1.496672e+11 -1.239097e+07
## [12431,] -9.012130e+05 -1.346226e+06 -6.408734e+10 -1.364636e+07
## [12432,] -1.354938e+08 -1.198178e+08 -3.985204e+11 -2.273262e+07
## [12433,] -3.303540e+11 -2.878886e+11 -2.386446e+15 -3.127245e+09
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## [12435,] -4.617928e+09 -4.187482e+09 -3.014553e+13 -1.166035e+08
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## [12611,] -1.196678e+06 -1.001437e+06 -6.526639e+10 -1.384923e+07
## [12612,] -1.310910e+08 -1.154224e+08 -4.058521e+11 -2.396590e+07
## [12613,] -3.217963e+11 -2.681946e+11 -2.431269e+15 -3.123058e+09
## [12614,] -2.513183e+11 -2.251957e+11 -1.841699e+15 -2.522480e+09
## [12615,] -4.795390e+09 -3.925639e+09 -3.071174e+13 -1.222251e+08
## [12616,] -3.374476e+05 -1.780556e+04 -1.525365e+11 -1.256606e+07
## [12617,] -1.012817e+06 -1.319408e+06 -6.529106e+10 -1.381113e+07
## [12618,] -1.281114e+08 -1.206389e+08 -4.060056e+11 -2.344896e+07
## [12619,] -4.071740e+11 -2.681938e+11 -2.432188e+15 -3.744944e+09
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## [12622,] -3.998587e+05 -1.270218e+05 -1.525942e+11 -1.274128e+07
## [12623,] -1.157416e+06 -1.681151e+06 -6.531575e+10 -1.388253e+07
## [12624,] -1.324999e+08 -1.154552e+08 -4.061591e+11 -2.324819e+07
## [12625,] -3.598681e+11 -2.979350e+11 -2.432188e+15 -2.978842e+09
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## [12802,] -2.809766e+05 -5.305650e+02 -1.552585e+11 -1.335619e+07
## [12803,] -1.138129e+06 -1.403205e+06 -6.645618e+10 -1.405360e+07
## [12804,] -1.330518e+08 -1.162283e+08 -4.134056e+11 -2.343334e+07
## [12805,] -3.196435e+11 -2.778960e+11 -2.475582e+15 -3.118960e+09
## [12806,] -2.456210e+11 -2.026585e+11 -1.875266e+15 -2.535107e+09
## [12807,] -4.500833e+09 -4.472790e+09 -3.128322e+13 -1.175445e+08
## [12808,] -2.864795e+05 -2.915453e+03 -1.554331e+11 -1.274770e+07
## [12809,] -1.052134e+06 -1.410456e+06 -6.655581e+10 -1.425007e+07
## [12810,] -1.322776e+08 -1.241488e+08 -4.138703e+11 -2.325890e+07
## [12811,] -3.291959e+11 -2.778935e+11 -2.478365e+15 -3.234260e+09
## [12812,] -2.480368e+11 -2.100256e+11 -1.877374e+15 -2.397920e+09
## [12813,] -4.431093e+09 -4.062855e+09 -3.130665e+13 -1.258910e+08
## [12814,] -1.306200e+05 -5.860731e+04 -1.556077e+11 -1.288158e+07
## [12815,] -1.633852e+06 -1.087319e+06 -6.663059e+10 -1.414535e+07
## [12816,] -1.331576e+08 -1.215470e+08 -4.143353e+11 -2.357061e+07
```



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## [12818,] -2.504643e+11 -2.251566e+11 -1.879484e+15 -2.295536e+09
## [12819,] -4.557698e+09 -4.334392e+09 -3.134183e+13 -1.189935e+08
## [12820,] -2.093997e+05 -3.139353e+02 -1.556660e+11 -1.295677e+07
## [12821,] -1.048344e+06 -1.661000e+06 -6.665552e+10 -1.419542e+07
## [12822,] -1.345597e+08 -1.189394e+08 -4.144903e+11 -2.391624e+07
## [12823,] -3.238667e+11 -2.978900e+11 -2.482078e+15 -3.139216e+09
## [12824,] -2.408153e+11 -2.251558e+11 -1.880187e+15 -2.526408e+09
## [12825,] -4.543783e+09 -4.063342e+09 -3.136529e+13 -1.238711e+08
## [12826,] -2.815926e+05 -2.625514e+02 -1.557825e+11 -1.293020e+07
## [12827,] -1.282732e+06 -1.662970e+06 -6.668046e+10 -1.415316e+07
## [12828,] -1.320903e+08 -1.163602e+08 -4.146454e+11 -2.363196e+07
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## [12830,] -2.874588e+11 -2.100200e+11 -1.883002e+15 -2.053194e+09
## [12831,] -4.418084e+09 -4.473915e+09 -3.141223e+13 -1.170465e+08
## [12832,] -2.259967e+05 -1.489161e+05 -1.560157e+11 -1.304900e+07
## [12833,] -1.138390e+06 -1.202067e+06 -6.678026e+10 -1.419464e+07
## [12834,] -1.305149e+08 -1.243021e+08 -4.152660e+11 -2.472104e+07
## [12835,] -3.291871e+11 -2.877984e+11 -2.487653e+15 -3.437912e+09
## [12836,] -2.636181e+11 -2.100186e+11 -1.884410e+15 -2.477261e+09
## [12837,] -4.729594e+09 -3.673360e+09 -3.142397e+13 -1.197966e+08
## [12838,] -2.697498e+05 -7.540351e+03 -1.560740e+11 -1.295232e+07
## [12839,] -1.140021e+06 -1.672839e+06 -6.680522e+10 -1.417453e+07
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## [12841,] -3.019674e+11 -3.081444e+11 -2.488582e+15 -3.307923e+09
## [12842,] -2.456104e+11 -2.175185e+11 -1.885114e+15 -2.683163e+09
## [12843,] -4.729804e+09 -3.931674e+09 -3.144746e+13 -1.200593e+08
## [12844,] -2.830218e+05 -2.531583e+04 -1.562490e+11 -1.278684e+07
## [12845,] -1.144922e+06 -1.678774e+06 -6.688014e+10 -1.405904e+07
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## [12852,] -1.325590e+08 -1.165416e+08 -4.163532e+11 -2.443001e+07
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## [12854,] -2.480246e+11 -2.100144e+11 -1.888637e+15 -2.468738e+09
## [12855,] -4.601540e+09 -4.615751e+09 -3.149447e+13 -1.131193e+08
## [12856,] -2.209397e+05 -6.343898e+01 -1.564241e+11 -1.291020e+07
## [12857,] -1.151472e+06 -1.816536e+06 -6.698009e+10 -1.420004e+07
## [12858,] -1.301429e+08 -1.244725e+08 -4.168196e+11 -2.398158e+07
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## [12860,] -2.480223e+11 -2.026434e+11 -1.890753e+15 -2.372732e+09
## [12861,] -4.802801e+09 -3.802174e+09 -3.152975e+13 -1.181202e+08
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## [12867,] -4.788516e+09 -4.475141e+09 -3.155328e+13 -1.222845e+08
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## [12873,] -4.803118e+09 -3.932632e+09 -3.156505e+13 -1.179425e+08
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## [12887,] -1.117129e+06 -1.461734e+06 -6.725534e+10 -1.427087e+07
## [12888,] -1.347076e+08 -1.246261e+08 -4.182203e+11 -2.374480e+07
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## [12890,] -2.488241e+11 -2.100060e+11 -1.897107e+15 -2.492064e+09
## [12891,] -4.475857e+09 -4.760328e+09 -3.163570e+13 -1.364481e+08
## [12892,] -1.212714e+05 -2.157508e+04 -1.571841e+11 -1.283699e+07
## [12893,] -1.183540e+06 -1.349065e+06 -6.730545e+10 -1.437527e+07
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## [12924,] -1.329111e+08 -1.142988e+08 -4.194673e+11 -2.409723e+07
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## [12927,] -4.660601e+09 -4.066363e+09 -3.173003e+13 -1.209215e+08
## [12928,] -4.694871e+05 -8.405524e+04 -1.576527e+11 -1.329090e+07
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## [12932,] -2.512486e+11 -2.026289e+11 -1.905595e+15 -2.515500e+09
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## [12956,] -2.602694e+11 -2.099941e+11 -1.909137e+15 -2.597136e+09
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## [12977,] -1.112804e+06 -1.887244e+06 -6.783269e+10 -1.441514e+07
## [12978,] -1.215811e+08 -1.223740e+08 -4.219669e+11 -2.380695e+07
## [12979,] -3.060438e+11 -2.681131e+11 -2.526850e+15 -3.261600e+09
## [12980,] -2.439733e+11 -1.953831e+11 -1.914812e+15 -2.705094e+09
## [12981,] -4.835471e+09 -3.935603e+09 -3.193095e+13 -1.228259e+08
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## [12985,] -3.312908e+11 -2.978483e+11 -2.528724e+15 -3.599770e+09
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## [12987,] -4.938008e+09 -4.068117e+09 -3.194278e+13 -1.168847e+08
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## [12993,] -4.792218e+09 -4.202924e+09 -3.196647e+13 -1.306533e+08
## [12994,] -2.719769e+05 -4.033194e+04 -1.587684e+11 -1.327169e+07
## [12995,] -1.089934e+06 -2.035325e+06 -6.795853e+10 -1.451137e+07
## [12996,] -1.332638e+08 -1.172024e+08 -4.225929e+11 -2.454302e+07
## [12997,] -3.238197e+11 -2.978449e+11 -2.532474e+15 -3.176476e+09
## [12998,] -2.352345e+11 -2.407748e+11 -1.918362e+15 -2.457500e+09
## [12999,] -4.865267e+09 -3.677900e+09 -3.200201e+13 -1.217699e+08
## [13000,] -1.309295e+05 -1.203577e+05 -1.590038e+11 -1.316377e+07
## [13001,] -1.141066e+06 -1.525231e+06 -6.810969e+10 -1.442682e+07
## [13002,] -1.281872e+08 -1.225601e+08 -4.236897e+11 -2.458418e+07
## [13003,] -4.130318e+11 -2.778428e+11 -2.537166e+15 -4.624867e+09
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## [13005,] -4.865693e+09 -4.340431e+09 -3.204943e+13 -1.250936e+08
## [13006,] -2.438299e+05 -8.044176e+02 -1.591804e+11 -1.304538e+07
## [13007,] -1.363874e+06 -2.052805e+06 -6.816011e+10 -1.438628e+07
## [13008,] -1.292907e+08 -1.225770e+08 -4.238465e+11 -2.415460e+07
## [13009,] -3.486692e+11 -3.508740e+11 -2.539044e+15 -3.422072e+09
## [13010,] -2.544926e+11 -2.174800e+11 -1.923339e+15 -2.314353e+09
## [13011,] -5.102341e+09 -4.340633e+09 -3.207315e+13 -1.361307e+08
## [13012,] -2.572305e+05 -1.425148e+04 -1.592983e+11 -1.308878e+07
## [13013,] -1.135489e+06 -2.054995e+06 -6.818533e+10 -1.449649e+07
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## [13015,] -3.101705e+11 -2.877524e+11 -2.539983e+15 -3.598670e+09
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## [13017,] -4.793276e+09 -3.806604e+09 -3.208502e+13 -1.253792e+08
## [13018,] -1.171976e+05 -1.171976e+05 -1.593572e+11 -1.313752e+07
## [13019,] -1.105947e+06 -1.785362e+06 -6.821055e+10 -1.446870e+07
## [13020,] -1.331639e+08 -1.199751e+08 -4.241601e+11 -2.426384e+07
## [13021,] -3.290760e+11 -2.528277e+11 -3.126511e+13 -1.562160e+09
## [13022,] -2.467997e+11 -2.059320e+11 -2.368349e+13 -1.146097e+09
## [13023,] -4.311784e+09 -3.246386e+09 -3.949402e+11 -2.511382e+07
## [13024,] -1.553725e+07 -1.797804e+07 -1.961556e+09 -1.622263e+04
## [13025,] -7.005918e+06 -5.697119e+06 -8.396160e+08 -6.673824e+04
## [13026,] -6.300372e+07 -5.474520e+07 -5.221064e+09 -9.030797e+05
## [13027,] -3.248128e+11 -2.719202e+11 -3.126511e+13 -1.467854e+09
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## [13029,] -4.148418e+09 -3.614052e+09 -3.949402e+11 -2.316023e+07
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## [13031,] -6.126455e+06 -5.933713e+06 -8.396160e+08 -6.447660e+04
## [13032,] -6.549748e+07 -5.126090e+07 -5.221064e+09 -1.052047e+06
## [13033,] -3.184701e+11 -3.018619e+11 -3.126511e+13 -1.993637e+09
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## [13036,] -1.673540e+07 -1.673540e+07 -1.961556e+09 -1.315418e+04
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## [13048,] -1.594544e+07 -1.734479e+07 -1.968100e+09 -1.182544e+04
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## [13049,] -6.693791e+06 -4.646304e+06 -8.424171e+08 -6.165751e+04
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## [13051,] -3.366662e+11 -2.778404e+11 -2.539983e+15 -3.313812e+09
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## [13055,] -1.359558e+06 -1.302959e+06 -6.826102e+10 -1.456633e+07
## [13056,] -1.337522e+08 -1.226447e+08 -4.244739e+11 -2.436152e+07
## [13057,] -3.143352e+11 -3.291362e+11 -2.541863e+15 -3.112903e+09
## [13058,] -2.297508e+11 -2.407665e+11 -1.926186e+15 -2.337531e+09
## [13059,] -4.880946e+09 -4.069579e+09 -3.212062e+13 -1.162282e+08
## [13060,] -2.179329e+05 -1.353117e+04 -1.595340e+11 -1.348074e+07
## [13061,] -1.152522e+06 -1.925224e+06 -6.828625e+10 -1.465092e+07
## [13062,] -1.334932e+08 -1.148386e+08 -4.246309e+11 -2.408634e+07
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## [13066,] -3.877368e+05 -2.113740e+04 -1.595930e+11 -1.320843e+07
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## [13070,] -2.544888e+11 -2.174765e+11 -1.926898e+15 -2.595190e+09
## [13071,] -4.721508e+09 -3.806981e+09 -3.213250e+13 -1.292269e+08
## [13072,] -1.202305e+05 -1.135493e+03 -1.595930e+11 -1.317051e+07
## [13073,] -1.273023e+06 -1.982215e+06 -6.831150e+10 -1.445837e+07
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## [13087,] -3.259289e+11 -2.778323e+11 -2.549386e+15 -3.153955e+09
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## [13110,] -1.329291e+08 -1.229156e+08 -4.269884e+11 -2.418720e+07
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## [13112,] -2.407538e+11 -2.407538e+11 -1.938308e+15 -2.778908e+09
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## [13114,] -1.553775e+05 -2.107115e+03 -1.605381e+11 -1.329745e+07
## [13115,] -1.139956e+06 -1.698235e+06 -6.874133e+10 -1.468488e+07
## [13116,] -1.396882e+08 -1.203269e+08 -4.274607e+11 -2.474257e+07
## [13117,] -3.111907e+11 -2.877344e+11 -2.560691e+15 -3.619045e+09
## [13118,] -2.281843e+11 -2.328578e+11 -1.939737e+15 -2.343975e+09
## [13119,] -5.285903e+09 -4.071432e+09 -3.234659e+13 -1.570726e+08
## [13120,] -3.099430e+05 -3.863160e+04 -1.606564e+11 -1.350521e+07
## [13121,] -1.110355e+06 -2.105693e+06 -6.876665e+10 -1.481133e+07
## [13122,] -1.349387e+08 -1.256518e+08 -4.276182e+11 -2.413491e+07
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## [13154,] -2.447398e+11 -2.099556e+11 -1.948320e+15 -2.709798e+09
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```

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## [13167,] -4.753690e+09 -3.809999e+09 -3.251360e+13 -1.229599e+08
## [13168,] -1.341564e+05 -5.735619e+04 -1.615452e+11 -1.357859e+07
## [13169,] -1.187500e+06 -1.481757e+06 -6.914710e+10 -1.483537e+07
## [13170,] -1.338172e+08 -1.286087e+08 -4.299840e+11 -2.423587e+07
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## [13183,] -3.355475e+11 -2.778057e+11 -2.580536e+15 -3.439970e+09
## [13184,] -2.503833e+11 -2.099493e+11 -1.954769e+15 -2.534657e+09
## [13185,] -4.768872e+09 -3.810659e+09 -3.259727e+13 -1.237762e+08
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## [13192,] -1.825695e+05 -2.521866e+04 -1.620203e+11 -1.350283e+07
## [13193,] -1.472767e+06 -1.878436e+06 -6.935044e+10 -1.473148e+07
## [13194,] -1.320443e+08 -1.233905e+08 -4.314066e+11 -2.476596e+07
## [13195,] -3.333888e+11 -2.877147e+11 -2.583377e+15 -3.109153e+09
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## [13197,] -4.900288e+09 -3.556967e+09 -3.264513e+13 -1.192291e+08
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## [13200,] -1.315124e+08 -1.260805e+08 -4.315648e+11 -2.455961e+07
## [13201,] -3.269616e+11 -2.491106e+11 -2.584324e+15 -3.288266e+09
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## [13209,] -4.769506e+09 -3.811226e+09 -3.266907e+13 -1.204082e+08
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## [13373,] -7.648296e+06 -5.890608e+06 -4.094551e+08 -1.585726e+04
## [13374,] -6.026851e+07 -5.099426e+07 -2.546153e+09 -6.305105e+05
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## [13377,] -3.931378e+09 -4.390292e+09 -1.935207e+11 -2.156268e+07
## [13378,] -1.935974e+07 -1.544582e+07 -9.611627e+08 -4.204375e+02
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## [13381,] -3.333662e+11 -2.500230e+11 -3.136942e+13 -1.576869e+09
## [13382,] -2.549244e+11 -1.879373e+11 -2.376250e+13 -1.168119e+09
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## [13384,] -1.672915e+07 -1.494896e+07 -1.968100e+09 -1.920214e+04
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## [13386,] -6.188109e+07 -4.790173e+07 -5.238482e+09 -1.026765e+06
## [13387,] -3.732362e+11 -3.121890e+11 -3.136942e+13 -1.720641e+09
## [13388,] -2.631814e+11 -2.059313e+11 -2.376250e+13 -1.299131e+09
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## [13396,] -1.727637e+07 -1.326332e+07 -1.974655e+09 -1.739204e+04
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## [13399,] -3.195211e+11 -2.719186e+11 -3.147390e+13 -1.666880e+09
## [13400,] -2.606897e+11 -2.133586e+11 -2.384164e+13 -1.201572e+09
## [13401,] -4.325742e+09 -3.614236e+09 -3.975776e+11 -2.533945e+07
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## [13413,] -4.818489e+09 -3.687917e+09 -3.329465e+13 -1.201319e+08
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## [13564,] -1.025752e+05 -5.447016e+01 -1.680777e+11 -1.394200e+07
## [13565,] -1.422387e+06 -2.389663e+06 -7.194324e+10 -1.529532e+07
## [13566,] -1.338063e+08 -1.250940e+08 -4.473714e+11 -2.559285e+07
## [13567,] -3.430552e+11 -2.777220e+11 -2.679944e+15 -3.069492e+09
## [13568,] -2.543785e+11 -2.098765e+11 -2.030071e+15 -2.195765e+09
## [13569,] -4.925672e+09 -4.083631e+09 -3.385299e+13 -1.190693e+08
## [13570,] -1.118401e+05 -4.431017e+01 -1.681382e+11 -1.417704e+07
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## [13572,] -1.343782e+08 -1.251111e+08 -4.475325e+11 -2.511850e+07
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## [13575,] -4.494895e+09 -4.494895e+09 -3.386518e+13 -1.209205e+08
## [13576,] -7.507528e+04 -2.064268e+04 -1.681988e+11 -1.390888e+07
## [13577,] -1.414342e+06 -1.825610e+06 -7.199506e+10 -1.529960e+07
## [13578,] -1.291761e+08 -1.360658e+08 -4.476937e+11 -2.541490e+07
## [13579,] -3.028218e+11 -3.079722e+11 -2.680909e+15 -3.708934e+09
## [13580,] -2.503030e+11 -1.952743e+11 -2.030802e+15 -2.534746e+09
## [13581,] -4.579494e+09 -3.951055e+09 -3.386518e+13 -1.331863e+08
## [13582,] -8.303046e+04 -2.368948e+04 -1.682593e+11 -1.421103e+07
## [13583,] -1.290637e+06 -2.396756e+06 -7.202098e+10 -1.545951e+07
## [13584,] -1.355259e+08 -1.198479e+08 -4.478548e+11 -2.530208e+07
## [13585,] -3.110825e+11 -3.079714e+11 -2.681874e+15 -3.343692e+09
## [13586,] -2.486815e+11 -1.952737e+11 -2.031533e+15 -2.381857e+09
## [13587,] -4.722351e+09 -4.083826e+09 -3.387737e+13 -1.234827e+08
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## [13590,] -1.363987e+08 -1.225161e+08 -4.481773e+11 -2.530542e+07
## [13591,] -3.142075e+11 -2.876287e+11 -2.683804e+15 -3.215427e+09
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## [13594,] -3.826005e+04 -5.820790e+03 -1.685016e+11 -1.407136e+07
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## [13597,] -3.194509e+11 -2.876262e+11 -2.686702e+15 -3.697033e+09
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## [13602,] -1.284999e+08 -1.199650e+08 -4.489839e+11 -2.575517e+07
## [13603,] -3.332909e+11 -2.777139e+11 -2.689601e+15 -3.017235e+09
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## [13609,] -2.926405e+11 -2.777107e+11 -2.693469e+15 -3.331863e+09
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## [13611,] -4.810327e+09 -3.952303e+09 -3.402384e+13 -1.218312e+08
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## [13619,] -1.625813e+06 -1.727437e+06 -7.241031e+10 -1.537616e+07
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## [13684,] -6.180179e+04 -2.235131e+03 -1.708123e+11 -1.443703e+07
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## [13774,] -8.283682e+04 -1.176974e+03 -1.718512e+11 -1.464987e+07
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## [13944,] -1.375796e+08 -1.298318e+08 -4.665830e+11 -2.643940e+07
## [13945,] -3.673849e+11 -2.776269e+11 -2.795008e+15 -3.038923e+09
## [13946,] -2.429632e+11 -2.172905e+11 -2.117233e+15 -2.469001e+09
## [13947,] -4.563381e+09 -4.367558e+09 -3.531893e+13 -1.243080e+08
## [13948,] -1.108814e+05 -5.467981e+04 -1.754191e+11 -1.468087e+07
## [13949,] -1.830652e+06 -1.938393e+06 -7.508564e+10 -1.598564e+07
## [13950,] -1.367924e+08 -1.192029e+08 -4.670767e+11 -2.649993e+07
## [13951,] -3.267685e+11 -2.776245e+11 -2.797965e+15 -3.709117e+09
## [13952,] -2.485908e+11 -2.097918e+11 -2.119473e+15 -2.682804e+09
## [13953,] -4.706198e+09 -4.230612e+09 -3.535629e+13 -1.274123e+08
## [13954,] -1.309396e+04 -1.582889e+02 -1.756047e+11 -1.471560e+07
## [13955,] -1.944782e+06 -2.530597e+06 -7.516506e+10 -1.606291e+07
## [13956,] -1.346154e+08 -1.299363e+08 -4.675707e+11 -2.647426e+07
## [13957,] -3.353466e+11 -2.976131e+11 -2.799937e+15 -3.463393e+09
## [13958,] -2.650301e+11 -2.172869e+11 -2.120967e+15 -2.444498e+09
## [13959,] -4.865699e+09 -4.095750e+09 -3.538121e+13 -1.211462e+08
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## [13970,] -2.534586e+11 -2.097834e+11 -2.128444e+15 -2.451769e+09
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## [13975,] -3.321055e+11 -2.678789e+11 -2.811785e+15 -3.628788e+09
## [13976,] -2.510127e+11 -1.951839e+11 -2.129942e+15 -2.581828e+09
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## [13979,] -1.531882e+06 -1.972587e+06 -7.550970e+10 -1.609537e+07
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## [13983,] -4.809058e+09 -3.964322e+09 -3.556836e+13 -1.211681e+08
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## [13991,] -1.744432e+06 -2.271616e+06 -7.566903e+10 -1.617555e+07
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## [14133,] -4.988825e+09 -3.837121e+09 -3.603211e+13 -1.208690e+08
## [14134,] -9.722369e+04 -2.882568e+03 -1.789613e+11 -1.526611e+07
## [14135,] -1.711565e+06 -2.663582e+06 -7.660181e+10 -1.654269e+07
## [14136,] -1.378131e+08 -1.175468e+08 -4.765065e+11 -2.677660e+07
## [14137,] -3.352979e+11 -2.975672e+11 -2.854443e+15 -2.753205e+09
## [14138,] -2.550600e+11 -2.172478e+11 -2.162256e+15 -2.236419e+09
## [14139,] -5.645072e+09 -3.837310e+09 -3.605726e+13 -1.640003e+08
## [14140,] -6.929529e+04 -1.744043e+04 -1.792737e+11 -1.505774e+07
## [14141,] -1.773456e+06 -2.517970e+06 -7.673553e+10 -1.637467e+07
## [14142,] -1.348464e+08 -1.228953e+08 -4.775046e+11 -2.671263e+07
## [14143,] -3.130096e+11 -2.874812e+11 -2.860421e+15 -3.658021e+09
## [14144,] -2.477347e+11 -2.172435e+11 -2.166784e+15 -2.545180e+09
## [14145,] -4.784825e+09 -4.236777e+09 -3.613278e+13 -1.342418e+08
## [14146,] -1.125773e+05 -4.365071e+04 -1.794613e+11 -1.505238e+07
## [14147,] -1.766503e+06 -2.079165e+06 -7.681582e+10 -1.640117e+07
## [14148,] -1.404982e+08 -1.282935e+08 -4.778375e+11 -2.715077e+07
## [14149,] -3.203513e+11 -3.288470e+11 -2.861418e+15 -3.646664e+09
## [14150,] -2.501623e+11 -2.172428e+11 -2.167539e+15 -2.677740e+09
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## [14152,] -9.710936e+04 -3.760765e+03 -1.795864e+11 -1.527337e+07
## [14153,] -1.783647e+06 -2.376452e+06 -7.686937e+10 -1.640561e+07
## [14154,] -1.416534e+08 -1.283108e+08 -4.780041e+11 -2.652637e+07
## [14155,] -3.140499e+11 -3.078137e+11 -2.864410e+15 -3.022772e+09
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## [14159,] -2.219812e+06 -2.234455e+06 -7.694973e+10 -1.628927e+07
## [14160,] -1.352310e+08 -1.310886e+08 -4.785038e+11 -2.745784e+07
## [14161,] -3.277745e+11 -2.488895e+11 -2.866405e+15 -3.273557e+09
## [14162,] -2.318430e+11 -2.485375e+11 -2.172073e+15 -2.677266e+09
## [14163,] -4.829106e+09 -4.237474e+09 -3.622097e+13 -1.319503e+08
## [14164,] -5.792856e+04 -8.343609e+04 -1.798993e+11 -1.508812e+07
## [14165,] -1.728763e+06 -2.701127e+06 -7.700332e+10 -1.646841e+07
## [14166,] -1.414777e+08 -1.366798e+08 -4.790037e+11 -2.649965e+07
## [14167,] -2.904807e+11 -2.975556e+11 -2.868401e+15 -3.252088e+09
## [14168,] -2.318423e+11 -2.405146e+11 -2.172829e+15 -2.668799e+09
## [14169,] -4.800269e+09 -4.102501e+09 -3.624619e+13 -1.383121e+08
## [14170,] -4.075041e+04 -1.994610e+04 -1.800246e+11 -1.525107e+07
## [14171,] -1.891235e+06 -2.547156e+06 -7.705694e+10 -1.656457e+07
## [14172,] -1.367155e+08 -1.311761e+08 -4.793372e+11 -2.670056e+07
## [14173,] -3.628087e+11 -2.775649e+11 -2.871397e+15 -3.885922e+09
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## [14179,] -3.235146e+11 -2.975522e+11 -2.872396e+15 -3.759064e+09
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## [14189,] -1.712205e+06 -2.728826e+06 -7.729843e+10 -1.679706e+07
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## [14222,] -2.525841e+11 -2.023662e+11 -2.185703e+15 -2.414032e+09
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## [14224,] -3.054000e+02 -2.378365e+04 -1.810910e+11 -1.510821e+07
## [14225,] -1.995837e+06 -2.749060e+06 -7.751341e+10 -1.641110e+07
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## [14323,] -3.077645e+11 -2.582321e+11 -2.922559e+15 -3.529430e+09
## [14324,] -2.541882e+11 -2.023401e+11 -2.214617e+15 -2.540325e+09
```

```
## [14325,] -4.704943e+09 -4.243047e+09 -3.693043e+13 -1.288639e+08
## [14326,] -1.251335e+05 -1.181215e+04 -1.834862e+11 -1.570498e+07
## [14327,] -2.080928e+06 -2.224870e+06 -7.856571e+10 -1.699148e+07
## [14328,] -1.382623e+08 -1.213651e+08 -4.885526e+11 -2.718656e+07
## [14329,] -3.245295e+11 -2.582298e+11 -2.925582e+15 -3.141774e+09
## [14330,] -2.404719e+11 -2.097022e+11 -2.216144e+15 -2.316384e+09
## [14331,] -4.791699e+09 -4.107985e+09 -3.695589e+13 -1.237232e+08
## [14332,] -3.539827e+04 -6.726673e+04 -1.836127e+11 -1.547558e+07
## [14333,] -1.809539e+06 -2.851352e+06 -7.859278e+10 -1.694927e+07
## [14334,] -1.368767e+08 -1.240330e+08 -4.887209e+11 -2.725696e+07
## [14335,] -3.202950e+11 -2.677880e+11 -2.926591e+15 -2.895943e+09
## [14336,] -2.420649e+11 -2.171965e+11 -2.216908e+15 -2.531924e+09
## [14337,] -4.952631e+09 -4.380900e+09 -3.698137e+13 -1.239901e+08
## [14338,] -6.476952e+04 -6.766367e+04 -1.836760e+11 -1.566406e+07
## [14339,] -1.759157e+06 -2.690588e+06 -7.861986e+10 -1.703241e+07
## [14340,] -1.436975e+08 -1.377360e+08 -4.888893e+11 -2.704047e+07
## [14341,] -3.298588e+11 -2.775198e+11 -2.927599e+15 -3.079229e+09
## [14342,] -2.476837e+11 -1.951055e+11 -2.217671e+15 -2.324052e+09
## [14343,] -4.548842e+09 -4.243544e+09 -3.699411e+13 -1.374046e+08
## [14344,] -2.746488e+03 -3.471160e+04 -1.837393e+11 -1.533536e+07
## [14345,] -2.073395e+06 -2.693095e+06 -7.864695e+10 -1.680061e+07
## [14346,] -1.397272e+08 -1.240671e+08 -4.890577e+11 -2.771213e+07
## [14347,] -3.352324e+11 -2.775190e+11 -2.928608e+15 -3.473738e+09
## [14348,] -2.349322e+11 -2.404689e+11 -2.219200e+15 -3.036213e+09
## [14349,] -4.879461e+09 -4.108376e+09 -3.700685e+13 -1.384058e+08
## [14350,] -3.425755e+04 -3.425755e+04 -1.838658e+11 -1.549377e+07
## [14351,] -2.461783e+06 -2.698113e+06 -7.870113e+10 -1.676088e+07
## [14352,] -1.363887e+08 -1.322284e+08 -4.893947e+11 -2.757720e+07
## [14353,] -3.202907e+11 -2.775166e+11 -2.931634e+15 -3.617749e+09
## [14354,] -2.468724e+11 -2.171915e+11 -2.222257e+15 -2.200169e+09
## [14355,] -4.720362e+09 -4.381507e+09 -3.705784e+13 -1.240923e+08
## [14356,] -4.178103e+04 -1.745770e+03 -1.841191e+11 -1.564737e+07
## [14357,] -2.016357e+06 -3.214214e+06 -7.880955e+10 -1.691076e+07
## [14358,] -1.398356e+08 -1.241692e+08 -4.900689e+11 -2.744607e+07
## [14359,] -3.352262e+11 -2.874197e+11 -2.935672e+15 -3.047602e+09
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## [14361,] -4.836331e+09 -3.975878e+09 -3.708335e+13 -1.267050e+08
## [14362,] -2.270274e+04 -1.875631e+03 -1.842459e+11 -1.571855e+07
## [14363,] -2.177031e+06 -2.553990e+06 -7.886379e+10 -1.678236e+07
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## [14366,] -2.533601e+11 -2.096938e+11 -2.225317e+15 -2.261178e+09
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## [14369,] -1.967439e+06 -2.879809e+06 -7.889092e+10 -1.698214e+07
## [14370,] -1.418783e+08 -1.323514e+08 -4.905749e+11 -2.755797e+07
## [14371,] -3.258716e+11 -2.817230e+11 -3.178837e+13 -1.576626e+09
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## [14373,] -4.367446e+09 -3.614511e+09 -4.015500e+11 -2.431928e+07
## [14374,] -1.610009e+07 -1.610009e+07 -1.994385e+09 -2.005848e+04
## [14375,] -6.401994e+06 -6.401994e+06 -8.536679e+08 -6.318473e+04
## [14376,] -6.117813e+07 -5.131562e+07 -5.308444e+09 -9.612856e+05
## [14377,] -3.195185e+11 -2.917035e+11 -3.178837e+13 -1.584036e+09
## [14378,] -2.508422e+11 -1.914676e+11 -2.407986e+13 -1.179025e+09
## [14379,] -4.298551e+09 -3.614511e+09 -4.015500e+11 -2.421616e+07
## [14380,] -1.744371e+07 -1.550715e+07 -1.994385e+09 -2.134585e+04
## [14381,] -6.501680e+06 -6.156147e+06 -8.536679e+08 -6.392675e+04
## [14382,] -6.249550e+07 -5.480175e+07 -5.308444e+09 -9.495890e+05
```

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## [14384,] -2.590333e+11 -2.286070e+11 -2.407986e+13 -1.145838e+09
## [14385,] -4.230204e+09 -3.246821e+09 -4.015500e+11 -2.473395e+07
## [14386,] -1.756853e+07 -1.492533e+07 -1.994385e+09 -2.091228e+04
## [14387,] -6.602136e+06 -5.220895e+06 -8.536679e+08 -6.318473e+04
## [14388,] -5.895242e+07 -6.211768e+07 -5.308444e+09 -9.542591e+05
## [14389,] -3.519095e+11 -2.622832e+11 -3.178837e+13 -1.525243e+09
## [14390,] -2.615163e+11 -2.209159e+11 -2.407986e+13 -1.151337e+09
## [14391,] -4.381291e+09 -3.614511e+09 -4.015500e+11 -2.380588e+07
## [14392,] -1.781950e+07 -1.435464e+07 -1.994385e+09 -2.112851e+04
## [14393,] -6.882362e+06 -5.678894e+06 -8.536679e+08 -6.392675e+04
## [14394,] -6.306438e+07 -4.961552e+07 -5.308444e+09 -9.426054e+05
## [14395,] -3.431190e+11 -3.121856e+11 -3.178837e+13 -1.539837e+09
## [14396,] -2.640112e+11 -2.133565e+11 -2.407986e+13 -1.134881e+09
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## [14401,] -3.406414e+11 -2.974972e+11 -2.938703e+15 -2.955444e+09
## [14402,] -2.149257e+11 -2.302312e+11 -2.226083e+15 -2.331068e+09
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## [14404,] -5.686380e+03 -8.482107e+02 -1.844360e+11 -1.548919e+07
## [14405,] -2.126190e+06 -2.720754e+06 -7.894519e+10 -1.695028e+07
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## [14413,] -3.181758e+11 -2.974947e+11 -2.941735e+15 -3.752602e+09
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## [14421,] -4.635506e+09 -4.522191e+09 -3.718547e+13 -1.354718e+08
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## [14453,] -1.840840e+06 -3.094250e+06 -7.935278e+10 -1.702859e+07
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## [14469,] -4.824438e+09 -3.978287e+09 -3.740295e+13 -1.290306e+08
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## [14494,] -9.703784e+03 -5.075072e+04 -1.867256e+11 -1.597958e+07
## [14495,] -2.106314e+06 -2.979205e+06 -7.992519e+10 -1.718161e+07
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```

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## [14512,] -6.816345e+02 -5.178879e+04 -1.871724e+11 -1.578444e+07
## [14513,] -2.152791e+06 -2.832801e+06 -8.014378e+10 -1.706574e+07
## [14514,] -1.438812e+08 -1.223605e+08 -4.985357e+11 -2.784786e+07
## [14515,] -3.255408e+11 -2.395888e+11 -2.985364e+15 -3.414022e+09
## [14516,] -2.665571e+11 -2.404277e+11 -2.261429e+15 -2.121138e+09
## [14517,] -4.625629e+09 -4.668438e+09 -3.772392e+13 -1.263872e+08
## [14518,] -6.957737e+03 -2.411473e+04 -1.873640e+11 -1.597509e+07
## [14519,] -1.932865e+06 -3.005642e+06 -8.019848e+10 -1.735929e+07
## [14520,] -1.413273e+08 -1.331967e+08 -4.987058e+11 -2.750336e+07
## [14521,] -3.244773e+11 -3.181378e+11 -2.986383e+15 -3.105396e+09
## [14522,] -2.444208e+11 -2.022975e+11 -2.262200e+15 -2.304179e+09
## [14523,] -5.107374e+09 -4.386769e+09 -3.772392e+13 -1.224182e+08
## [14524,] -4.109665e+04 -1.436556e+05 -1.873640e+11 -1.604073e+07
## [14525,] -2.378856e+06 -2.517001e+06 -8.019848e+10 -1.733886e+07
## [14526,] -1.379337e+08 -1.359731e+08 -4.987058e+11 -2.764160e+07
## [14527,] -3.298079e+11 -2.974580e+11 -2.986383e+15 -3.074312e+09
## [14528,] -2.341051e+11 -2.247803e+11 -2.262200e+15 -2.366900e+09
## [14529,] -4.856223e+09 -3.849722e+09 -3.772392e+13 -1.306586e+08
## [14530,] -2.670209e+03 -5.234474e+01 -1.874279e+11 -1.573765e+07
## [14531,] -2.351029e+06 -2.366097e+06 -8.022584e+10 -1.734931e+07
## [14532,] -1.393787e+08 -1.304838e+08 -4.990460e+11 -2.811264e+07
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## [14540,] -2.574169e+11 -2.325327e+11 -2.267604e+15 -2.518703e+09
## [14541,] -4.485073e+09 -4.669169e+09 -3.781404e+13 -1.353688e+08
## [14542,] -9.562919e+04 -1.364274e+02 -1.878116e+11 -1.543232e+07
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## [14702,] -2.476025e+11 -1.986323e+11 -2.407986e+13 -1.190193e+09
## [14703,] -4.203018e+09 -3.614511e+09 -4.015500e+11 -2.473395e+07
## [14704,] -1.688754e+07 -1.492533e+07 -1.994385e+09 -2.027026e+04
## [14705,] -6.327734e+06 -5.447488e+06 -8.536679e+08 -6.343159e+04
## [14706,] -6.174100e+07 -4.961552e+07 -5.308444e+09 -9.565984e+05
## [14707,] -3.431190e+11 -3.121856e+11 -3.178837e+13 -1.481877e+09
## [14708,] -2.508422e+11 -2.364297e+11 -2.407986e+13 -1.179025e+09
## [14709,] -4.055064e+09 -3.489757e+09 -4.015500e+11 -2.483817e+07
## [14710,] -1.845471e+07 -1.324663e+07 -1.994385e+09 -2.112851e+04
## [14711,] -6.551812e+06 -5.447488e+06 -8.536679e+08 -6.367893e+04
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## [14713,] -3.322873e+11 -3.018577e+11 -3.178837e+13 -1.554501e+09
## [14714,] -2.606873e+11 -2.059286e+11 -2.407986e+13 -1.145838e+09
## [14715,] -4.203018e+09 -3.741456e+09 -4.015500e+11 -2.442262e+07
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## [14717,] -6.779788e+06 -5.678894e+06 -8.536679e+08 -6.343159e+04
## [14718,] -5.968974e+07 -5.131562e+07 -5.308444e+09 -9.589406e+05
## [14719,] -3.453062e+11 -3.121856e+11 -3.178837e+13 -1.525243e+09
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## [14722,] -1.682630e+07 -1.550715e+07 -1.994385e+09 -2.048315e+04
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## [14729,] -6.933938e+06 -5.220895e+06 -8.536679e+08 -6.467311e+04
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## [14732,] -2.540895e+11 -2.171075e+11 -2.313410e+15 -2.538643e+09
## [14733,] -4.819665e+09 -4.120434e+09 -3.859088e+13 -1.352180e+08
## [14734,] -4.726295e+03 -4.295112e+04 -1.917346e+11 -1.627259e+07
## [14735,] -2.253318e+06 -3.735766e+06 -8.206926e+10 -1.773295e+07
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## [14740,] -6.777503e+04 -2.579130e+05 -1.919286e+11 -1.630916e+07
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## [14745,] -4.834846e+09 -3.987739e+09 -3.866900e+13 -1.360561e+08
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## [14748,] -1.420855e+08 -1.372772e+08 -5.111997e+11 -2.855006e+07
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## [14757,] -4.762555e+09 -4.256696e+09 -3.869506e+13 -1.279157e+08
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## [14892,] -1.440227e+08 -1.327632e+08 -5.214105e+11 -2.940907e+07
## [14893,] -3.329098e+11 -2.872698e+11 -3.123386e+15 -3.478598e+09
## [14894,] -2.223829e+11 -2.170598e+11 -2.365981e+15 -2.294432e+09
## [14895,] -4.855800e+09 -4.540194e+09 -3.945454e+13 -1.376185e+08
## [14896,] -1.156140e+03 -1.655135e+05 -1.960249e+11 -1.649976e+07
## [14897,] -2.919052e+06 -2.852384e+06 -8.390564e+10 -1.793932e+07
## [14898,] -1.454993e+08 -1.355707e+08 -5.217584e+11 -2.861343e+07
## [14899,] -3.404800e+11 -2.676353e+11 -3.124427e+15 -4.413589e+09
## [14900,] -2.540372e+11 -2.403265e+11 -2.366770e+15 -2.232613e+09
## [14901,] -4.870504e+09 -4.400343e+09 -3.946770e+13 -1.277518e+08
## [14902,] -2.104862e+04 -2.317579e+05 -1.960249e+11 -1.654220e+07
## [14903,] -2.593414e+06 -2.852384e+06 -8.390564e+10 -1.817279e+07
## [14904,] -1.361464e+08 -1.355885e+08 -5.219323e+11 -2.877546e+07
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## [14906,] -2.515892e+11 -2.170583e+11 -2.367559e+15 -2.224882e+09
## [14907,] -4.797840e+09 -3.993725e+09 -3.948086e+13 -1.277691e+08
## [14908,] -1.846661e+03 -1.211295e+04 -1.961556e+11 -1.680439e+07
## [14909,] -2.188863e+06 -3.198889e+06 -8.396160e+10 -1.808137e+07
## [14910,] -1.421103e+08 -1.247045e+08 -5.222804e+11 -2.933375e+07
## [14911,] -3.211811e+11 -2.973439e+11 -3.127554e+15 -3.522349e+09
## [14912,] -2.340031e+11 -1.949733e+11 -2.369928e+15 -2.428065e+09
## [14913,] -5.182560e+09 -4.400749e+09 -3.952036e+13 -1.655155e+08
## [14914,] -1.449095e+05 -1.124338e+05 -1.962864e+11 -1.603114e+07
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## [14917,] -2.953112e+11 -3.075915e+11 -3.131724e+15 -3.689872e+09
## [14918,] -2.239099e+11 -2.170541e+11 -2.372298e+15 -2.565636e+09
## [14919,] -4.626152e+09 -4.401155e+09 -3.957305e+13 -1.278900e+08
## [14920,] -3.171669e+02 -1.705248e+05 -1.965482e+11 -1.663452e+07
## [14921,] -1.975636e+06 -3.041783e+06 -8.412961e+10 -1.799114e+07
## [14922,] -1.315632e+08 -1.470945e+08 -5.231511e+11 -3.014544e+07
## [14923,] -2.822889e+11 -3.393861e+11 -3.132768e+15 -4.302040e+09
## [14924,] -2.162982e+11 -2.403205e+11 -2.373088e+15 -3.182162e+09
## [14925,] -5.018662e+09 -4.263479e+09 -3.958623e+13 -1.264908e+08
## [14926,] -6.170888e+03 -3.609168e+04 -1.966136e+11 -1.663467e+07
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## [14929,] -3.286104e+11 -2.773556e+11 -3.136942e+15 -3.815001e+09
## [14930,] -2.523937e+11 -2.095566e+11 -2.377832e+15 -2.277822e+09
## [14931,] -4.755810e+09 -4.263978e+09 -3.965216e+13 -1.381335e+08
## [14932,] -1.386486e+03 -7.202504e+04 -1.969411e+11 -1.667803e+07
## [14933,] -2.455936e+06 -3.231774e+06 -8.429778e+10 -1.813019e+07
## [14934,] -1.431869e+08 -1.275985e+08 -5.243713e+11 -2.876186e+07
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## [14936,] -2.435070e+11 -1.949658e+11 -2.378623e+15 -2.589725e+09
## [14937,] -4.712916e+09 -4.128679e+09 -3.969174e+13 -1.404109e+08
## [14938,] -6.880098e+02 -1.775374e+05 -1.972688e+11 -1.671535e+07
## [14939,] -2.851713e+06 -3.071174e+06 -8.443806e+10 -1.801252e+07
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## [14942,] -2.238997e+11 -2.324236e+11 -2.383372e+15 -2.672469e+09
## [14943,] -4.960812e+09 -3.995657e+09 -3.974455e+13 -1.358089e+08
## [14944,] -3.836065e+03 -3.965959e+04 -1.973999e+11 -1.683172e+07
## [14945,] -2.581908e+06 -3.076533e+06 -8.449420e+10 -1.817995e+07
## [14946,] -1.421529e+08 -1.304210e+08 -5.254183e+11 -2.927537e+07
## [14947,] -3.296719e+11 -2.872518e+11 -3.146344e+15 -3.367577e+09
## [14948,] -2.387228e+11 -2.246681e+11 -2.383372e+15 -2.331828e+09
## [14949,] -4.902012e+09 -4.129071e+09 -3.974455e+13 -1.283518e+08
## [14950,] -3.257047e+04 -1.218468e+05 -1.974655e+11 -1.704673e+07
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## [14954,] -2.548370e+11 -2.021889e+11 -2.385748e+15 -2.556111e+09
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## [14960,] -2.491341e+11 -2.147783e+11 -2.388126e+15 -3.217227e+09
## [14961,] -5.080115e+09 -4.129661e+09 -3.982383e+13 -1.356718e+08
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## [14965,] -3.243354e+11 -2.872452e+11 -3.154713e+15 -3.081174e+09
## [14966,] -2.254319e+11 -2.170384e+11 -2.389712e+15 -2.418199e+09
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## [14977,] -3.106777e+11 -2.773379e+11 -3.159950e+15 -3.377248e+09
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## [15002,] -2.531855e+11 -2.021745e+11 -2.402417e+15 -2.229365e+09
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## [15082,] -6.730251e+03 -1.447002e+05 -2.001644e+11 -1.712694e+07
## [15083,] -2.376452e+06 -3.370603e+06 -8.570577e+10 -1.865990e+07
## [15084,] -1.420804e+08 -1.395246e+08 -5.329523e+11 -2.955390e+07
## [15085,] -3.003499e+11 -3.075432e+11 -3.191460e+15 -3.277834e+09
## [15086,] -2.458775e+11 -1.963680e+11 -2.417547e+15 -2.585916e+09
## [15087,] -4.448723e+09 -4.269069e+09 -4.032775e+13 -1.351297e+08
## [15088,] -1.227737e+03 -4.048219e+05 -2.003626e+11 -1.673460e+07
## [15089,] -2.568763e+06 -3.749366e+06 -8.579062e+10 -1.863309e+07
## [15090,] -1.418499e+08 -1.312251e+08 -5.334799e+11 -2.972218e+07
## [15091,] -2.952613e+11 -2.872141e+11 -3.194619e+15 -3.752502e+09
## [15092,] -2.539848e+11 -2.095188e+11 -2.420739e+15 -2.181999e+09
## [15093,] -4.921717e+09 -4.269369e+09 -4.036767e+13 -1.277434e+08
## [15094,] -3.481392e+02 -2.104921e+05 -2.004948e+11 -1.730718e+07
## [15095,] -2.207488e+06 -2.862201e+06 -8.581892e+10 -1.870752e+07
## [15096,] -1.453094e+08 -1.395968e+08 -5.336559e+11 -2.913327e+07
## [15097,] -3.034189e+11 -2.972897e+11 -3.195673e+15 -3.684211e+09
## [15098,] -2.482922e+11 -2.170092e+11 -2.422335e+15 -2.635181e+09
## [15099,] -4.704215e+09 -4.133983e+09 -4.040761e+13 -1.389124e+08
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## [15101,] -2.408174e+06 -3.390273e+06 -8.590382e+10 -1.835138e+07
## [15102,] -1.477009e+08 -1.340695e+08 -5.343599e+11 -2.925682e+07
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## [15104,] -2.394780e+11 -2.021559e+11 -2.423933e+15 -2.511587e+09
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## [15108,] -1.468666e+08 -1.368907e+08 -5.347121e+11 -2.924746e+07
## [15109,] -3.179577e+11 -2.773049e+11 -3.203053e+15 -3.046331e+09
## [15110,] -2.507195e+11 -2.246289e+11 -2.426329e+15 -2.211914e+09
## [15111,] -4.661660e+09 -3.869566e+09 -4.046089e+13 -1.417123e+08
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## [15114,] -1.480848e+08 -1.314002e+08 -5.352406e+11 -2.918169e+07
## [15115,] -3.221741e+11 -2.972822e+11 -3.205163e+15 -3.515640e+09
## [15116,] -2.442614e+11 -2.021525e+11 -2.427927e+15 -2.462661e+09
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## [15120,] -1.437668e+08 -1.286885e+08 -5.354168e+11 -2.957915e+07
## [15121,] -3.158556e+11 -2.872043e+11 -3.207274e+15 -3.449460e+09
## [15122,] -2.402673e+11 -2.095111e+11 -2.429526e+15 -2.454465e+09
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## [15126,] -1.432300e+08 -1.287231e+08 -5.357694e+11 -3.017142e+07
## [15127,] -3.296192e+11 -2.773001e+11 -3.209385e+15 -3.683006e+09
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## [15138,] -1.430900e+08 -1.343527e+08 -5.371807e+11 -2.987124e+07
## [15139,] -3.349856e+11 -3.075229e+11 -3.216780e+15 -4.065084e+09
## [15140,] -2.816663e+11 -2.095048e+11 -2.436728e+15 -2.734628e+09
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## [15145,] -3.296113e+11 -2.666009e+11 -3.218895e+15 -3.470400e+09
## [15146,] -2.154861e+11 -2.402591e+11 -2.438330e+15 -2.575655e+09
## [15147,] -4.135850e+09 -5.131868e+09 -4.066101e+13 -1.570830e+08
## [15148,] -5.489408e+02 -2.269276e+05 -2.020181e+11 -1.689126e+07
## [15149,] -2.517728e+06 -2.596171e+06 -8.647094e+10 -1.885987e+07
## [15150,] -1.400124e+08 -1.316456e+08 -5.377104e+11 -3.027700e+07
## [15151,] -3.253429e+11 -2.772912e+11 -3.221010e+15 -3.243460e+09
## [15152,] -2.672152e+11 -2.169928e+11 -2.440733e+15 -3.658154e+09
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## [15218,] -2.261440e+11 -2.246036e+11 -2.454377e+15 -2.380349e+09
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```

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## [15256,] -3.272034e+03 -7.890833e+04 -2.044807e+11 -1.767821e+07
## [15257,] -2.704192e+06 -3.370042e+06 -8.752502e+10 -1.881997e+07
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## [15272,] -2.613450e+11 -2.021133e+11 -2.473702e+15 -2.154639e+09
## [15273,] -4.539991e+09 -4.140176e+09 -4.125088e+13 -1.383208e+08
## [15274,] -9.812452e+03 -1.296497e+05 -2.048814e+11 -1.710069e+07
## [15275,] -3.069674e+06 -2.866856e+06 -8.769655e+10 -1.906485e+07
## [15276,] -1.419293e+08 -1.436452e+08 -5.453317e+11 -2.978464e+07
## [15277,] -3.253063e+11 -2.570292e+11 -3.265591e+15 -3.488423e+09
## [15278,] -2.410219e+11 -1.948855e+11 -2.473702e+15 -2.284560e+09
## [15279,] -4.884807e+09 -4.554106e+09 -4.125088e+13 -1.286484e+08
## [15280,] -3.398762e+01 -1.889187e+05 -2.048814e+11 -1.716242e+07
## [15281,] -2.623081e+06 -3.386897e+06 -8.769655e+10 -1.897072e+07
## [15282,] -1.471264e+08 -1.324183e+08 -5.455096e+11 -2.980604e+07
## [15283,] -3.200114e+11 -3.074831e+11 -3.266656e+15 -3.020748e+09
## [15284,] -2.482427e+11 -1.948849e+11 -2.474509e+15 -2.450227e+09
## [15285,] -4.826567e+09 -4.140274e+09 -4.126433e+13 -1.337004e+08
## [15286,] -1.111503e+02 -2.600907e+05 -2.049483e+11 -1.762289e+07
## [15287,] -3.040717e+06 -3.392524e+06 -8.775377e+10 -1.887731e+07
## [15288,] -1.494766e+08 -1.324358e+08 -5.456875e+11 -3.016827e+07
## [15289,] -3.285009e+11 -3.074814e+11 -3.268787e+15 -3.411516e+09
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## [15292,] -8.852613e+04 -1.329724e+05 -2.052826e+11 -1.758611e+07
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## [15301,] -3.284965e+11 -2.972280e+11 -3.274118e+15 -3.699992e+09
## [15302,] -2.162029e+11 -2.245804e+11 -2.480161e+15 -2.902488e+09
## [15303,] -4.726145e+09 -3.876033e+09 -4.137205e+13 -1.331163e+08
## [15304,] -3.878795e+04 -1.962961e+05 -2.056172e+11 -1.756812e+07
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## [15313,] -3.327776e+11 -2.772454e+11 -3.281587e+15 -3.859765e+09
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## [15462,] -1.476028e+08 -1.334226e+08 -5.556967e+11 -3.074624e+07
## [15463,] -3.316644e+11 -2.636405e+11 -3.328734e+15 -3.363141e+09
## [15464,] -2.506292e+11 -2.094314e+11 -2.521534e+15 -2.234007e+09
## [15465,] -4.935236e+09 -4.420033e+09 -4.206208e+13 -1.376767e+08
## [15466,] -6.051467e+03 -6.592587e+04 -2.089105e+11 -1.818110e+07
## [15467,] -2.978519e+06 -2.861166e+06 -8.947890e+10 -1.939431e+07
## [15468,] -1.482593e+08 -1.307423e+08 -5.564151e+11 -3.070053e+07
## [15469,] -3.468607e+11 -2.303090e+11 -3.331961e+15 -3.025871e+09
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## [15473,] -3.368303e+06 -3.386334e+06 -8.953669e+10 -1.946400e+07
## [15474,] -1.428108e+08 -1.363084e+08 -5.567745e+11 -3.030765e+07
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## [15477,] -4.906618e+09 -4.561019e+09 -4.215724e+13 -1.392805e+08
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## [15487,] -3.210061e+11 -2.674733e+11 -3.341651e+15 -3.254866e+09
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## [15501,] -5.115138e+09 -4.283660e+09 -4.229336e+13 -1.290338e+08
## [15502,] -2.862926e+03 -3.226978e+05 -2.100592e+11 -1.819648e+07
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## [15652,] -5.671385e+04 -2.202793e+05 -2.145486e+11 -1.862285e+07
## [15653,] -2.960400e+06 -3.806995e+06 -9.189301e+10 -1.986938e+07
## [15654,] -1.477830e+08 -1.463318e+08 -5.716091e+11 -3.230754e+07
## [15655,] -3.434999e+11 -2.771400e+11 -3.422947e+15 -3.366241e+09
## [15656,] -2.291161e+11 -2.481323e+11 -2.592900e+15 -2.391432e+09
## [15657,] -4.442717e+09 -4.569176e+09 -4.323859e+13 -1.384831e+08
## [15658,] -4.467839e+04 -2.231577e+05 -2.148223e+11 -1.822653e+07
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## [15659,] -3.050746e+06 -4.246103e+06 -9.195158e+10 -2.006719e+07
## [15660,] -1.443306e+08 -1.434694e+08 -5.717912e+11 -3.161263e+07
## [15661,] -3.146357e+11 -3.283748e+11 -3.424037e+15 -2.937354e+09
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## [15663,] -4.900735e+09 -4.154841e+09 -4.327992e+13 -1.475489e+08
## [15664,] -7.068607e+04 -1.059702e+05 -2.150276e+11 -1.836737e+07
## [15665,] -3.010148e+06 -3.824908e+06 -9.206877e+10 -2.016942e+07
## [15666,] -1.499201e+08 -1.378651e+08 -5.725199e+11 -3.184929e+07
## [15667,] -3.478791e+11 -2.674101e+11 -3.428401e+15 -2.876725e+09
## [15668,] -2.361539e+11 -2.322284e+11 -2.597859e+15 -2.430812e+09
## [15669,] -5.153459e+09 -4.429487e+09 -4.333506e+13 -1.279775e+08
## [15670,] -2.800377e+05 -8.750471e+02 -2.152330e+11 -1.858583e+07
## [15671,] -3.314832e+06 -3.833880e+06 -9.215671e+10 -1.997457e+07
## [15672,] -1.493907e+08 -1.407439e+08 -5.730668e+11 -3.105626e+07
## [15673,] -3.011844e+11 -2.870331e+11 -3.431676e+15 -3.247633e+09
## [15674,] -2.229386e+11 -2.244732e+11 -2.601167e+15 -2.335480e+09
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## [15676,] -1.405219e+05 -6.529955e+04 -2.154385e+11 -1.867644e+07
## [15677,] -3.249271e+06 -4.438315e+06 -9.221536e+10 -1.994001e+07
## [15678,] -1.503070e+08 -1.351582e+08 -5.734315e+11 -3.178439e+07
## [15679,] -3.209325e+11 -2.674061e+11 -3.433860e+15 -3.184038e+09
## [15680,] -2.457063e+11 -2.168526e+11 -2.601167e+15 -2.143586e+09
## [15681,] -4.872217e+09 -4.291566e+09 -4.337644e+13 -1.294544e+08
## [15682,] -2.515076e+04 -2.297025e+05 -2.154385e+11 -1.845151e+07
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## [15686,] -2.369392e+11 -1.876854e+11 -2.601994e+15 -2.676299e+09
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## [15691,] -3.269348e+11 -2.817213e+11 -3.199889e+13 -1.547040e+09
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## [15708,] -6.291083e+07 -4.797580e+07 -5.361220e+09 -8.807233e+05
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## [15721,] -3.262323e+11 -2.674045e+11 -3.436045e+15 -3.110667e+09
## [15722,] -2.473157e+11 -2.093622e+11 -2.602822e+15 -2.296297e+09
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## [15729,] -4.770791e+09 -4.430097e+09 -4.341784e+13 -1.434409e+08
## [15730,] -4.951540e+03 -1.104949e+05 -2.156442e+11 -1.832406e+07
## [15731,] -3.169600e+06 -4.243458e+06 -9.230338e+10 -2.022878e+07
## [15732,] -1.568888e+08 -1.408346e+08 -5.739788e+11 -3.214860e+07
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## [15736,] -1.402619e+04 -3.118517e+05 -2.158499e+11 -1.842043e+07
## [15737,] -3.128215e+06 -4.481628e+06 -9.242079e+10 -2.021215e+07
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## [15843,] -4.703593e+09 -4.434778e+09 -4.405511e+13 -1.537374e+08
## [15844,] -3.584822e+04 -3.505335e+05 -2.188783e+11 -1.871662e+07
## [15845,] -3.334506e+06 -4.600758e+06 -9.368772e+10 -2.070018e+07
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## [15848,] -2.513279e+11 -2.093272e+11 -2.644367e+15 -2.207985e+09
## [15849,] -4.892397e+09 -4.026727e+09 -4.409683e+13 -1.339699e+08
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## [15851,] -3.233367e+06 -3.997172e+06 -9.374686e+10 -2.023021e+07
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## [15859,] -3.467257e+11 -2.301990e+11 -3.495295e+15 -3.338815e+09
## [15860,] -2.321842e+11 -2.244327e+11 -2.647704e+15 -2.323519e+09
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## [15862,] -1.562462e+05 -5.006451e+04 -2.192929e+11 -1.795120e+07
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## [15959,] -3.639157e+06 -3.752326e+06 -9.514195e+10 -2.062135e+07
## [15960,] -1.536473e+08 -1.397377e+08 -5.916302e+11 -3.215270e+07
## [15961,] -3.314920e+11 -2.673279e+11 -3.542839e+15 -3.238842e+09
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## [15999,] -4.942972e+09 -4.059275e+09 -4.494947e+13 -1.444533e+08
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## [16032,] -6.158906e+07 -5.483570e+07 -5.361220e+09 -9.634356e+05
## [16033,] -3.333600e+11 -2.917010e+11 -3.210441e+13 -1.569052e+09
## [16034,] -2.598573e+11 -2.209138e+11 -2.431926e+13 -1.178868e+09
## [16035,] -4.230502e+09 -3.870878e+09 -4.055422e+11 -2.465272e+07
## [16036,] -1.792624e+07 -1.216712e+07 -2.014213e+09 -2.049890e+04
## [16037,] -6.540081e+06 -6.144777e+06 -8.621551e+08 -6.434241e+04
## [16038,] -6.463087e+07 -5.662227e+07 -5.361220e+09 -9.424095e+05
## [16039,] -3.431163e+11 -3.018551e+11 -3.210441e+13 -1.569052e+09
## [16040,] -2.665155e+11 -2.209138e+11 -2.431926e+13 -1.156692e+09
## [16041,] -4.479124e+09 -3.614787e+09 -4.055422e+11 -2.454889e+07
## [16042,] -1.748689e+07 -1.490762e+07 -2.014213e+09 -2.007406e+04
## [16043,] -6.365619e+06 -6.390398e+06 -8.621551e+08 -6.310409e+04
## [16044,] -5.972517e+07 -5.307776e+07 -5.361220e+09 -9.752169e+05
## [16045,] -3.312110e+11 -3.121830e+11 -3.210441e+13 -1.576444e+09
## [16046,] -2.435804e+11 -2.443817e+11 -2.431926e+13 -1.184445e+09
## [16047,] -4.479124e+09 -3.247082e+09 -4.055422e+11 -2.465272e+07
## [16048,] -1.742457e+07 -1.548910e+07 -2.014213e+09 -2.049890e+04
## [16049,] -6.415225e+06 -6.390398e+06 -8.621551e+08 -6.359797e+04
## [16050,] -6.310080e+07 -5.483570e+07 -5.361220e+09 -9.540620e+05
## [16051,] -3.357774e+11 -2.577586e+11 -3.569514e+15 -3.131577e+09
## [16052,] -2.578207e+11 -2.400164e+11 -2.704769e+15 -2.157368e+09
## [16053,] -4.554731e+09 -4.442414e+09 -4.510409e+13 -1.369560e+08
## [16054,] -9.796847e+04 -4.206879e+05 -2.240193e+11 -1.920909e+07
## [16055,] -3.434256e+06 -4.424159e+06 -9.588822e+10 -2.101053e+07
## [16056,] -1.442400e+08 -1.430925e+08 -5.968288e+11 -3.250487e+07
## [16057,] -3.314673e+11 -2.869275e+11 -3.573970e+15 -3.100022e+09
## [16058,] -2.496466e+11 -2.243813e+11 -2.707301e+15 -2.583232e+09
## [16059,] -4.944584e+09 -4.304391e+09 -4.516038e+13 -1.360491e+08
## [16060,] -1.248525e+05 -4.246622e+05 -2.242988e+11 -1.959738e+07
## [16061,] -3.993995e+06 -3.838669e+06 -9.600789e+10 -2.100707e+07
## [16062,] -1.550900e+08 -1.459882e+08 -5.970149e+11 -3.207836e+07
## [16063,] -3.368540e+11 -2.969981e+11 -3.575084e+15 -2.926018e+09
## [16064,] -2.496459e+11 -2.321312e+11 -2.708145e+15 -2.187329e+09
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## [16066,] -7.771090e+04 -5.274254e+05 -2.242988e+11 -1.954459e+07
## [16067,] -3.373129e+06 -4.232761e+06 -9.600789e+10 -2.089031e+07
## [16068,] -1.530107e+08 -1.431108e+08 -5.970149e+11 -3.258185e+07
## [16069,] -3.368540e+11 -2.869267e+11 -3.575084e+15 -3.364820e+09
## [16070,] -2.352683e+11 -2.092741e+11 -2.708145e+15 -2.326036e+09
## [16071,] -4.798485e+09 -4.442822e+09 -4.516038e+13 -1.355612e+08
## [16072,] -5.905211e+04 -6.437631e+05 -2.244387e+11 -1.957790e+07
## [16073,] -3.324857e+06 -4.443468e+06 -9.606776e+10 -2.108861e+07
## [16074,] -1.524570e+08 -1.305519e+08 -5.973872e+11 -3.270871e+07
## [16075,] -3.031218e+11 -2.869242e+11 -3.578428e+15 -3.584269e+09
## [16076,] -2.520813e+11 -2.019162e+11 -2.710678e+15 -2.582922e+09
## [16077,] -4.784312e+09 -4.168446e+09 -4.520262e+13 -1.397904e+08
## [16078,] -1.428921e+05 -5.307604e+05 -2.245086e+11 -1.934775e+07
## [16079,] -3.226611e+06 -4.662592e+06 -9.615759e+10 -2.093423e+07
## [16080,] -1.566795e+08 -1.403526e+08 -5.979458e+11 -3.334020e+07
## [16081,] -3.411890e+11 -2.483728e+11 -3.582889e+15 -3.342611e+09
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## [16086,] -1.522936e+08 -1.404250e+08 -5.986910e+11 -3.223779e+07
## [16087,] -3.124225e+11 -2.770209e+11 -3.586237e+15 -3.235451e+09
## [16088,] -2.528911e+11 -2.019114e+11 -2.716593e+15 -2.278597e+09
## [16089,] -4.843467e+09 -4.444146e+09 -4.534357e+13 -1.495402e+08
## [16090,] -1.014622e+05 -1.319712e+05 -2.252087e+11 -1.965235e+07
## [16091,] -3.467131e+06 -5.127037e+06 -9.642733e+10 -2.092085e+07
## [16092,] -1.527024e+08 -1.377108e+08 -5.998097e+11 -3.317990e+07
## [16093,] -3.357597e+11 -2.869144e+11 -3.591820e+15 -3.695618e+09
## [16094,] -2.392073e+11 -2.019072e+11 -2.721668e+15 -2.262699e+09
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## [16122,] -1.499838e+08 -1.379261e+08 -6.020503e+11 -3.339617e+07
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## [16125,] -4.714815e+09 -4.170913e+09 -4.555541e+13 -1.317003e+08
## [16126,] -1.642971e+05 -5.961489e+03 -2.263311e+11 -1.985384e+07
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## [16180,] -7.494134e+04 -5.867187e+05 -2.279493e+11 -1.971826e+07
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## [16203,] -4.921727e+09 -4.040024e+09 -4.602319e+13 -1.606184e+08
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## [16215,] -4.922049e+09 -4.174467e+09 -4.606583e+13 -1.406464e+08
## [16216,] -7.588139e+04 -4.907923e+05 -2.287959e+11 -1.958796e+07
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## [16222,] -1.772285e+05 -4.961602e+05 -2.291492e+11 -1.972103e+07
## [16223,] -3.894685e+06 -4.665232e+06 -9.811425e+10 -2.146842e+07
## [16224,] -1.528539e+08 -1.358947e+08 -6.101131e+11 -3.290642e+07
## [16225,] -3.367919e+11 -2.769727e+11 -3.653519e+15 -3.042359e+09
## [16226,] -2.367920e+11 -2.167110e+11 -2.768413e+15 -2.266419e+09
## [16227,] -4.576621e+09 -4.175159e+09 -4.616541e+13 -1.485778e+08
## [16228,] -9.238682e+04 -2.332317e+05 -2.293612e+11 -2.008084e+07
## [16229,] -3.504395e+06 -4.671836e+06 -9.817477e+10 -2.157819e+07
## [16230,] -1.543749e+08 -1.415683e+08 -6.104895e+11 -3.251327e+07
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## [16232,] -2.375783e+11 -2.243255e+11 -2.772683e+15 -2.618600e+09
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## [16234,] -1.399724e+05 -4.034229e+05 -2.296441e+11 -1.986152e+07
## [16235,] -3.503193e+06 -4.075775e+06 -9.835644e+10 -2.142054e+07
## [16236,] -1.553825e+08 -1.360373e+08 -6.116191e+11 -3.372292e+07
## [16237,] -2.969332e+11 -3.281865e+11 -3.662538e+15 -4.108636e+09
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## [16240,] -2.623403e+05 -4.275752e+05 -2.299980e+11 -1.993553e+07
## [16241,] -3.554410e+06 -4.292079e+06 -9.850795e+10 -2.167005e+07
## [16242,] -1.551795e+08 -1.446323e+08 -6.125613e+11 -3.282823e+07
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## [16244,] -2.577532e+11 -2.167025e+11 -2.778665e+15 -2.158728e+09
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## [16251,] -4.997912e+09 -4.451383e+09 -4.635063e+13 -1.447623e+08
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## [16258,] -1.520939e+05 -4.141711e+05 -2.304230e+11 -1.987662e+07
## [16259,] -3.772662e+06 -4.937119e+06 -9.862925e+10 -2.152519e+07
## [16260,] -1.534905e+08 -1.390232e+08 -6.135042e+11 -3.295441e+07
## [16261,] -3.400289e+11 -2.769582e+11 -3.673826e+15 -3.113219e+09
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## [16412,] -2.610170e+11 -2.166648e+11 -2.824171e+15 -2.842657e+09
```

```
## [16413,] -5.062935e+09 -4.318038e+09 -4.709520e+13 -1.350570e+08
## [16414,] -2.315226e+05 -2.104921e+05 -2.340514e+11 -1.981186e+07
## [16415,] -3.761450e+06 -4.687705e+06 -1.002741e+11 -2.192815e+07
## [16416,] -1.512408e+08 -1.316140e+08 -6.235436e+11 -3.421432e+07
## [16417,] -3.259993e+11 -2.671936e+11 -3.733945e+15 -3.056954e+09
## [16418,] -2.312458e+11 -1.945982e+11 -2.829345e+15 -2.580371e+09
## [16419,] -4.945125e+09 -4.318640e+09 -4.718150e+13 -1.453257e+08
## [16420,] -1.442587e+05 -5.778557e+05 -2.343371e+11 -2.052929e+07
## [16421,] -3.821740e+06 -4.905927e+06 -1.003046e+11 -2.198129e+07
## [16422,] -1.506902e+08 -1.515729e+08 -6.239241e+11 -3.417622e+07
## [16423,] -3.476304e+11 -2.576437e+11 -3.736223e+15 -3.341371e+09
## [16424,] -2.446978e+11 -2.091741e+11 -2.830208e+15 -2.588541e+09
## [16425,] -4.915835e+09 -4.047994e+09 -4.719589e+13 -1.522378e+08
## [16426,] -1.288585e+05 -1.123632e+06 -2.344801e+11 -2.053638e+07
## [16427,] -3.792398e+06 -4.916087e+06 -1.003964e+11 -2.201199e+07
## [16428,] -1.527915e+08 -1.344449e+08 -6.243046e+11 -3.363658e+07
## [16429,] -3.081543e+11 -2.968774e+11 -3.738502e+15 -3.427946e+09
## [16430,] -2.471091e+11 -2.091720e+11 -2.832798e+15 -2.253258e+09
## [16431,] -4.886846e+09 -3.916193e+09 -4.723907e+13 -1.411400e+08
## [16432,] -2.522016e+05 -4.742322e+05 -2.346231e+11 -2.011307e+07
## [16433,] -4.332193e+06 -4.291446e+06 -1.004577e+11 -2.209085e+07
## [16434,] -1.552054e+08 -1.344803e+08 -6.246853e+11 -3.377939e+07
## [16435,] -3.302650e+11 -2.769107e+11 -3.740781e+15 -3.015366e+09
## [16436,] -2.511571e+11 -2.091713e+11 -2.833661e+15 -2.338692e+09
## [16437,] -4.960394e+09 -4.886953e+09 -4.725347e+13 -1.337957e+08
## [16438,] -2.175621e+05 -3.789560e+05 -2.347661e+11 -2.051001e+07
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## [16440,] -1.796741e+08 -1.344980e+08 -6.248757e+11 -3.535010e+07
## [16441,] -3.102239e+11 -2.868047e+11 -3.743062e+15 -3.808667e+09
## [16442,] -2.438915e+11 -2.018159e+11 -2.835389e+15 -2.338544e+09
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## [16447,] -3.324083e+11 -2.671865e+11 -3.744202e+15 -3.438420e+09
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## [16451,] -4.069484e+06 -4.310462e+06 -1.006414e+11 -2.192674e+07
## [16452,] -1.553197e+08 -1.430450e+08 -6.258280e+11 -3.404183e+07
## [16453,] -3.040217e+11 -3.388841e+11 -3.748765e+15 -3.340399e+09
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## [16455,] -4.571352e+09 -4.320147e+09 -4.739758e+13 -1.512121e+08
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## [16460,] -2.258032e+11 -2.242640e+11 -2.845764e+15 -2.884018e+09
## [16461,] -4.873931e+09 -4.049841e+09 -4.746971e+13 -1.469604e+08
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## [16463,] -3.750550e+06 -5.198570e+06 -1.009481e+11 -2.223368e+07
## [16464,] -1.475564e+08 -1.490136e+08 -6.277349e+11 -3.407515e+07
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## [16466,] -2.312297e+11 -2.242619e+11 -2.848360e+15 -2.720617e+09
## [16467,] -4.962224e+09 -3.787985e+09 -4.749859e+13 -1.495464e+08
## [16468,] -9.896594e+04 -3.060754e+05 -2.359120e+11 -2.074980e+07
## [16469,] -4.024351e+06 -4.345435e+06 -1.009788e+11 -2.217153e+07
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## [16473,] -4.918193e+09 -4.050133e+09 -4.751302e+13 -1.547289e+08
## [16474,] -9.527036e+04 -6.060739e+05 -2.360555e+11 -2.074334e+07
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## [16476,] -1.523200e+08 -1.520248e+08 -6.284984e+11 -3.444714e+07
## [16477,] -3.249133e+11 -2.867900e+11 -3.763615e+15 -3.738276e+09
## [16478,] -2.527681e+11 -2.018015e+11 -2.853557e+15 -2.480294e+09
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## [16486,] -2.564250e+05 -6.120373e+05 -2.364142e+11 -2.061530e+07
## [16487,] -4.048915e+06 -5.008003e+06 -1.012244e+11 -2.199384e+07
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## [16495,] -3.345390e+11 -2.671667e+11 -3.772768e+15 -2.982400e+09
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## [16500,] -1.552184e+08 -1.552184e+08 -6.307919e+11 -3.444241e+07
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```



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## [16601,] -4.079417e+06 -4.716869e+06 -1.025192e+11 -2.259805e+07
## [16602,] -1.549903e+08 -1.384723e+08 -6.375049e+11 -3.430700e+07
## [16603,] -3.564115e+11 -2.671343e+11 -3.819852e+15 -4.523259e+09
## [16604,] -2.311915e+11 -2.017699e+11 -2.893558e+15 -2.317947e+09
## [16605,] -5.252105e+09 -4.464852e+09 -4.825229e+13 -1.350182e+08
## [16606,] -2.610581e+05 -7.944048e+05 -2.396555e+11 -2.094921e+07
## [16607,] -4.068867e+06 -5.163089e+06 -1.026120e+11 -2.224808e+07
## [16608,] -1.550855e+08 -1.413938e+08 -6.384668e+11 -3.483035e+07
## [16609,] -3.345001e+11 -3.070578e+11 -3.823309e+15 -4.035413e+09
## [16610,] -2.478599e+11 -2.017672e+11 -2.897049e+15 -3.210276e+09
## [16611,] -4.749399e+09 -4.606234e+09 -4.831051e+13 -1.488020e+08
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## [16614,] -1.575557e+08 -1.358306e+08 -6.392369e+11 -3.459845e+07
## [16615,] -2.947849e+11 -3.174701e+11 -3.827920e+15 -4.202493e+09
## [16616,] -2.510981e+11 -2.242184e+11 -2.900543e+15 -2.957724e+09
## [16617,] -4.635108e+09 -4.326880e+09 -4.836877e+13 -1.519573e+08
## [16618,] -2.092040e+05 -4.538288e+05 -2.402340e+11 -2.112158e+07
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## [16639,] -3.091118e+11 -2.867327e+11 -3.844081e+15 -3.343842e+09
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## [16647,] -4.867428e+09 -4.191666e+09 -4.857295e+13 -1.496495e+08
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## [16653,] -4.926556e+09 -4.192161e+09 -4.864598e+13 -1.406634e+08
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## [16657,] -3.301798e+11 -2.671122e+11 -3.852175e+15 -3.089561e+09
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## [16666,] -1.056521e+05 -4.767614e+05 -2.418285e+11 -2.129703e+07
##
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## [2,] -9.548015e+08 -3.418411e+08
## [3,] -2.033740e+07 -7.116162e+06
## [4,] -3.635205e+03 -3.495148e+03
## [5,] -1.818567e+03 -1.466487e+04
## [6,] -5.338110e+05 -3.063866e+05
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## [9,] -1.775624e+07 -8.200492e+06
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## [11,] -2.413504e+03 -1.565892e+04
## [12,] -5.278029e+05 -3.071213e+05
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## [1530,] -8.871604e+06 -7.372652e+06
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## [1532,] -1.959795e+09 -7.373322e+08
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## [1849,] -2.693702e+09 -9.740991e+08
## [1850,] -1.962580e+09 -6.870639e+08
## [1851,] -6.988128e+07 -3.643283e+07
## [1852,] -3.606439e+06 -4.278108e+06
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## [1898,] -1.918824e+09 -6.571097e+08
## [1899,] -7.041112e+07 -3.783877e+07
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## [1902,] -9.305090e+06 -7.721658e+06
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## [1904,] -2.152830e+09 -8.014270e+08
## [1905,] -8.156099e+07 -4.222716e+07
## [1906,] -3.509077e+06 -4.242375e+06
## [1907,] -4.234251e+06 -4.647668e+06
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## [1912,] -3.704521e+06 -4.363039e+06
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## [1934,] -1.611923e+09 -5.646853e+08
## [1935,] -6.531430e+07 -3.486565e+07
## [1936,] -3.613500e+06 -4.304347e+06
## [1937,] -4.297539e+06 -4.752384e+06
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## [2181,] -8.138876e+07 -4.278513e+07
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## [2814,] -1.047707e+07 -8.813669e+06
## [2815,] -2.610689e+09 -8.963182e+08
## [2816,] -2.230661e+09 -7.797501e+08
## [2817,] -8.071374e+07 -4.590972e+07
## [2818,] -4.094828e+06 -4.815198e+06
## [2819,] -4.775794e+06 -5.277176e+06
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## [2823,] -7.500232e+07 -4.068797e+07
## [2824,] -4.228788e+06 -4.927208e+06
## [2825,] -4.708614e+06 -5.276179e+06
## [2826,] -1.024319e+07 -8.627363e+06
## [2827,] -3.015608e+09 -1.164927e+09
## [2828,] -2.268992e+09 -8.396665e+08
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## [2831,] -4.793211e+06 -5.338469e+06
## [2832,] -1.005744e+07 -8.540686e+06
## [2833,] -2.745568e+09 -9.994854e+08
## [2834,] -2.132022e+09 -7.482773e+08
## [2835,] -7.519697e+07 -4.016531e+07
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## [2837,] -4.852589e+06 -5.417097e+06
## [2838,] -1.009267e+07 -8.538158e+06
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## [2840,] -2.434028e+09 -7.660494e+08
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## [2845,] -2.208088e+09 -7.827438e+08
## [2846,] -1.963008e+09 -6.958495e+08
## [2847,] -7.271623e+07 -3.913969e+07
## [2848,] -4.219892e+06 -4.950738e+06
## [2849,] -4.802302e+06 -5.343526e+06
## [2850,] -1.089823e+07 -8.862274e+06
## [2851,] -2.515857e+09 -8.904727e+08
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## [2856,] -1.025445e+07 -8.708181e+06
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## [2859,] -7.438434e+07 -3.852556e+07
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## [2863,] -3.118155e+09 -1.183671e+09
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## [2868,] -1.060157e+07 -8.672311e+06
## [2869,] -2.534206e+09 -9.352933e+08
## [2870,] -2.214572e+09 -7.215175e+08
## [2871,] -8.352164e+07 -4.308980e+07
## [2872,] -4.153200e+06 -4.941276e+06
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## [2874,] -1.029984e+07 -8.892172e+06
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## [2877,] -8.371306e+07 -4.447485e+07
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## [2879,] -4.943831e+06 -5.444578e+06
## [2880,] -1.066118e+07 -8.676812e+06
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## [2882,] -2.772527e+09 -9.407749e+08
## [2883,] -7.735475e+07 -4.421641e+07
## [2884,] -4.226701e+06 -4.948154e+06
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## [2886,] -1.020935e+07 -8.624401e+06
## [2887,] -2.618970e+09 -9.522374e+08
## [2888,] -2.298983e+09 -8.437525e+08
## [2889,] -7.722446e+07 -4.165072e+07
## [2890,] -4.248421e+06 -4.902055e+06
## [2891,] -4.869477e+06 -5.400683e+06
## [2892,] -1.046046e+07 -8.812644e+06
## [2893,] -2.862796e+09 -1.132563e+09
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## [2974,] -4.455073e+06 -5.150900e+06
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## [2985,] -7.636489e+07 -4.035249e+07
## [2986,] -4.364316e+06 -5.107068e+06
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## [2988,] -1.037652e+07 -8.686160e+06
## [2989,] -2.598368e+09 -9.227659e+08
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## [2991,] -8.197892e+07 -3.957782e+07
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## [2993,] -4.942737e+06 -5.466345e+06
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## [2995,] -3.012588e+09 -1.144058e+09
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## [2997,] -7.936058e+07 -4.322336e+07
## [2998,] -4.286989e+06 -5.006690e+06
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## [3004,] -4.392713e+06 -5.104030e+06
## [3005,] -5.029402e+06 -5.525130e+06
## [3006,] -1.039129e+07 -8.692620e+06
## [3007,] -2.569709e+09 -9.396903e+08
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## [3010,] -4.256237e+06 -4.930302e+06
## [3011,] -4.909109e+06 -5.419552e+06
## [3012,] -1.070218e+07 -9.027423e+06
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## [3471,] -7.487042e+07 -3.992675e+07
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## [4424,] -2.063225e+09 -7.207568e+08
## [4425,] -8.306389e+07 -4.682295e+07
## [4426,] -5.129667e+06 -5.994385e+06
## [4427,] -6.133409e+06 -6.702476e+06
## [4428,] -1.253592e+07 -1.035242e+07
## [4429,] -3.473521e+09 -1.223899e+09
## [4430,] -2.274573e+09 -8.289906e+08
## [4431,] -8.481794e+07 -4.698725e+07
## [4432,] -5.303575e+06 -6.111998e+06
## [4433,] -6.037943e+06 -6.552336e+06
## [4434,] -1.197162e+07 -1.017331e+07
## [4435,] -2.915594e+09 -1.134256e+09
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## [4440,] -1.197691e+07 -1.009436e+07
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## [5709,] -2.257712e+07 -8.959144e+06
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## [6995,] -8.151824e+06 -8.858435e+06
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## [7965,] -1.057544e+08 -5.546231e+07
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## [8927,] -9.949290e+06 -1.064820e+07
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## [9889,] -3.238535e+09 -1.129512e+09
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## [9900,] -1.927982e+07 -1.670302e+07
## [9901,] -3.302230e+09 -1.167255e+09
## [9902,] -2.455297e+09 -8.520889e+08
## [9903,] -1.158092e+08 -6.447670e+07
## [9904,] -9.794166e+06 -1.086772e+07
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## [15032,] -1.190193e+09 -4.492690e+08
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## [15036,] -9.589406e+05 -6.112269e+05
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## [15042,] -9.636336e+05 -6.112269e+05
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## [15044,] -1.167910e+09 -4.561727e+08
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## [16632,] -3.432677e+07 -3.097733e+07
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## [16634,] -2.499547e+09 -8.638735e+08
## [16635,] -1.400407e+08 -8.611983e+07
## [16636,] -2.135733e+07 -2.300082e+07
## [16637,] -2.254130e+07 -2.380222e+07
## [16638,] -3.645184e+07 -3.284661e+07
## [16639,] -3.300866e+09 -1.066810e+09
## [16640,] -2.748718e+09 -8.830067e+08
## [16641,] -1.486083e+08 -8.749930e+07
## [16642,] -2.121986e+07 -2.281537e+07
## [16643,] -2.265791e+07 -2.386449e+07
## [16644,] -3.471031e+07 -3.119452e+07
## [16645,] -3.184116e+09 -1.109853e+09
## [16646,] -2.427006e+09 -7.621124e+08
## [16647,] -1.501621e+08 -9.047560e+07
## [16648,] -2.095290e+07 -2.269459e+07
## [16649,] -2.254910e+07 -2.380066e+07
## [16650,] -3.497242e+07 -3.132237e+07
## [16651,] -2.986906e+09 -1.054370e+09
## [16652,] -2.215576e+09 -7.753524e+08
## [16653,] -1.394248e+08 -8.621913e+07
## [16654,] -2.070187e+07 -2.246157e+07
## [16655,] -2.258486e+07 -2.384219e+07
## [16656,] -3.499050e+07 -3.120564e+07
## [16657,] -3.120722e+09 -1.072556e+09
## [16658,] -2.714244e+09 -8.826888e+08
## [16659,] -1.515791e+08 -9.157623e+07
## [16660,] -2.104978e+07 -2.277405e+07
## [16661,] -2.265539e+07 -2.383316e+07
## [16662,] -3.442533e+07 -3.101762e+07
## [16663,] -4.140030e+09 -1.399385e+09
## [16664,] -3.053716e+09 -1.033112e+09
## [16665,] -1.472480e+08 -9.019389e+07
## [16666,] -2.131769e+07 -2.291681e+07
## [ reached getOption("max.print") -- omitted 37274 rows ]
```

- Utilicen la función `optim` de R para numericamente el máximo de la función de verosimilitud. Si lo hacen correctamente, su solución debe coincidir con la del método `lm`.