

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.

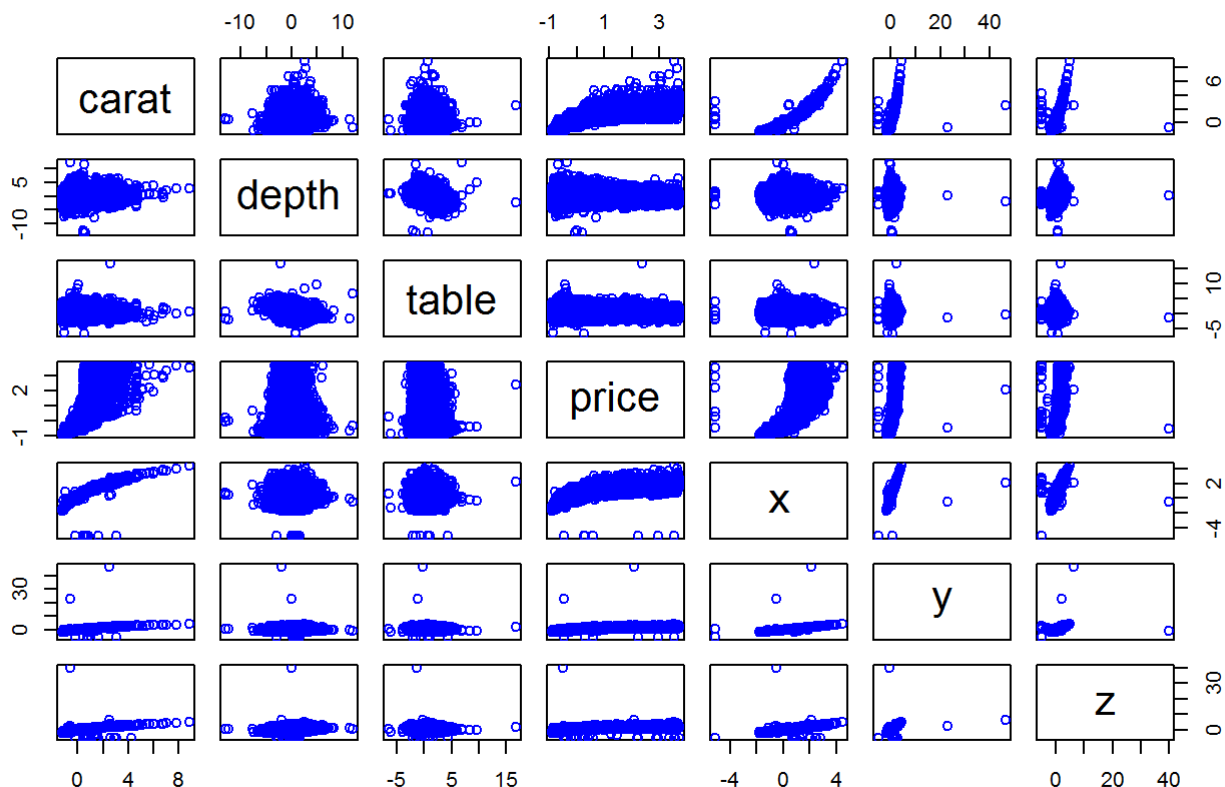
Creamos un nuevo data_frame que solo contiene los datos que vamos a utilizar, es decir, las variables numéricas centralizadas

```
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



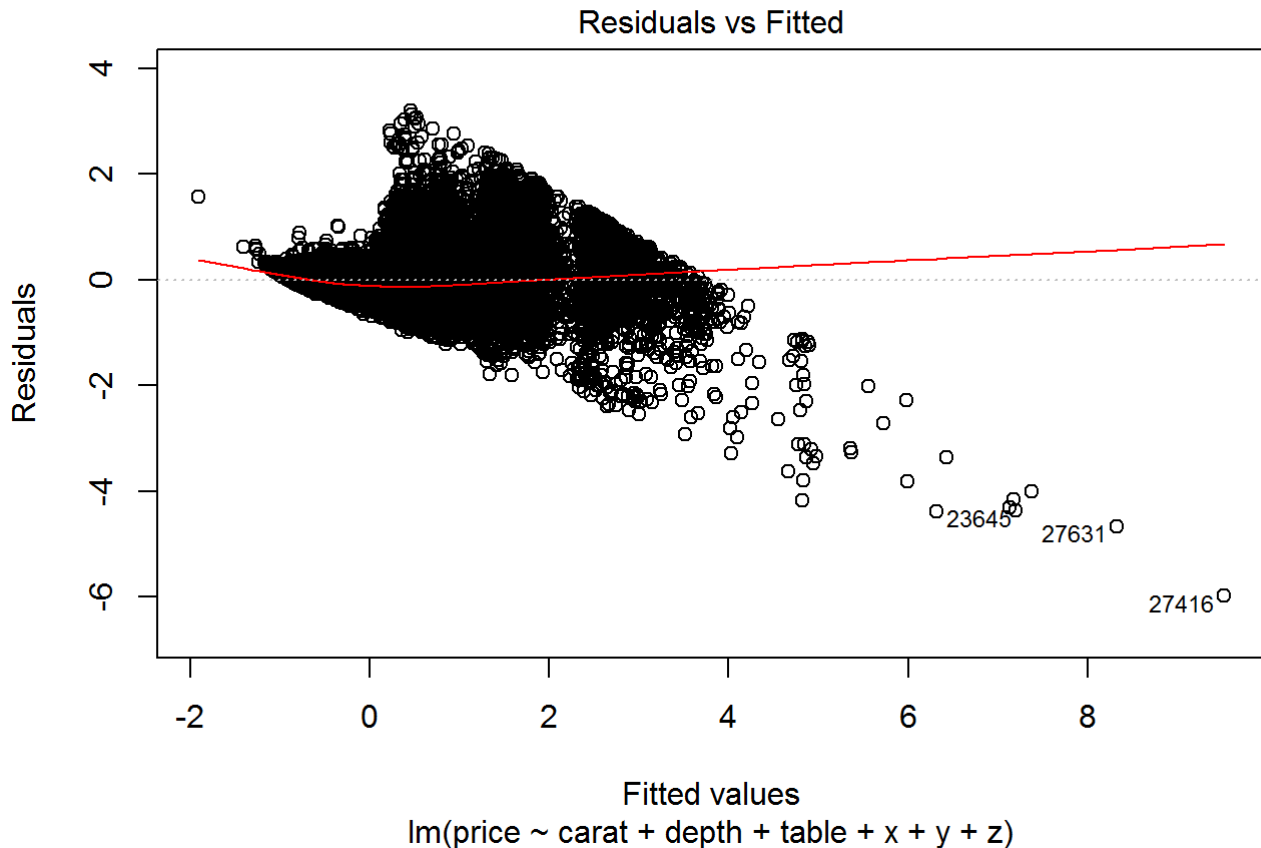
Gracias a la matriz de las variables en pares podemos discernir de forma rápida una relación positiva entre el precio y la variable “carat”, aunque la varianza aumenta conforme aumenta esta variable. También podemos observar que no hay mucha relación entre el precio y las variables “y”(ancho en mm) y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

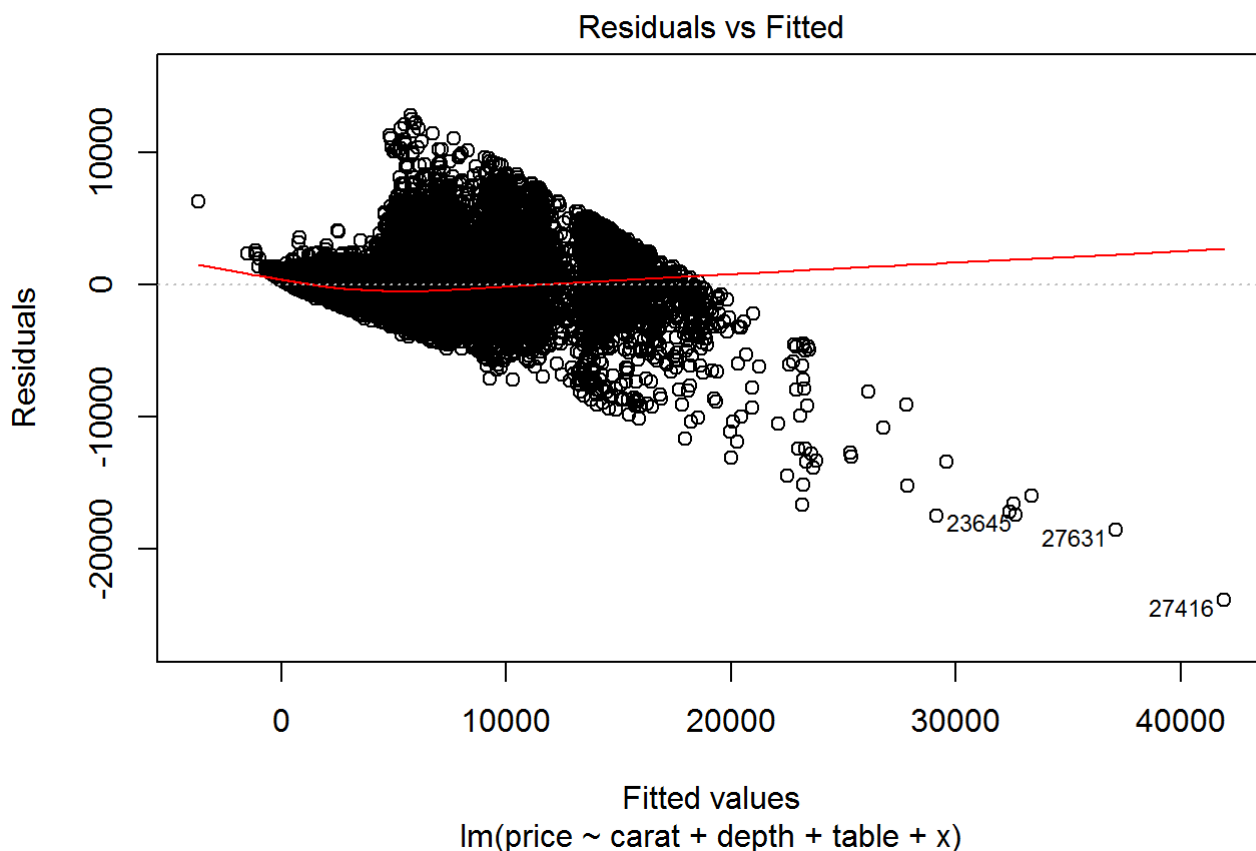
- ¿Qué medida puede ayudarnos a saber la calidad del ajuste? ¿Cuál fue el valor de R^2 que ajustó su modelo y que relación tienen con la calidad del ajuste?

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)
```



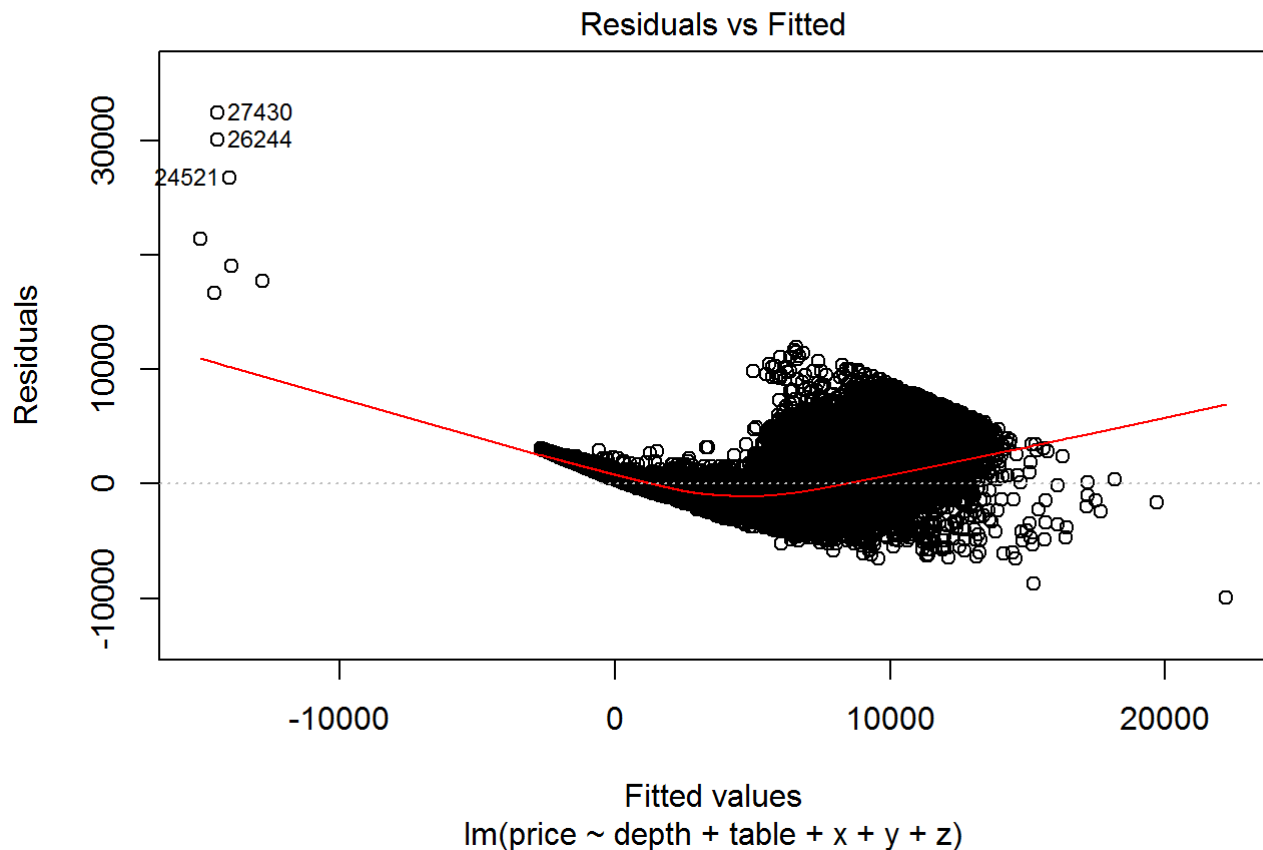
Aquí vemos, como era esperado, que deshacernos de las dos variables que no eran relevantes prácticamente no modifica valores como la media de los residuales o la R cuadrada.


```
# 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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## [425,] -5.271147e+05 -6.315594e+05 -1.844204e+10 -3.453417e+06
## [426,] -9.154529e+07 -8.045390e+07 -1.146799e+11 -7.645380e+06
## [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
## [429,] -4.823094e+09 -3.950709e+09 -8.680972e+12 -7.265110e+07
## [430,] -6.193060e+06 -5.062186e+06 -4.314659e+10 -2.935221e+06
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## [432,] -8.952492e+07 -8.483269e+07 -1.148430e+11 -8.131154e+06
## [433,] -3.260717e+11 -2.701578e+11 -6.881995e+14 -2.170850e+09
## [434,] -2.231467e+11 -2.507757e+11 -5.213147e+14 -2.111531e+09
## [435,] -4.452728e+09 -3.950901e+09 -8.693320e+12 -6.742213e+07
## [436,] -5.539329e+06 -4.102353e+06 -4.317726e+10 -2.966030e+06
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## [439,] -3.250082e+11 -2.701578e+11 -6.881995e+14 -2.617260e+09
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## [520,] -6.229319e+06 -3.494617e+06 -4.345379e+10 -2.920535e+06
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##	[582,]	-9.959307e+07	-8.511444e+07	-1.164813e+11	-8.363259e+06
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##	[588,]	-8.960215e+07	-8.076949e+07	-1.165635e+11	-8.168116e+06
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##	[591,]	-4.609882e+09	-4.220519e+09	-8.823509e+12	-6.445333e+07
##	[592,]	-6.254214e+06	-4.983409e+06	-4.385478e+10	-3.039801e+06
##	[593,]	-7.463357e+05	-3.356743e+05	-1.877141e+10	-3.558018e+06
##	[594,]	-8.694699e+07	-7.243408e+07	-1.168103e+11	-8.236080e+06
##	[595,]	-3.196968e+11	-2.605383e+11	-6.994913e+14	-2.809591e+09
##	[596,]	-2.748710e+11	-2.193148e+11	-5.298683e+14	-2.036054e+09
##	[597,]	-4.059102e+09	-4.220717e+09	-8.835959e+12	-6.979382e+07
##	[598,]	-6.139020e+06	-4.652697e+06	-4.388571e+10	-3.034666e+06
##	[599,]	-7.365714e+05	-4.579563e+05	-1.878465e+10	-3.570165e+06
##	[600,]	-9.330780e+07	-7.656511e+07	-1.168103e+11	-8.147033e+06
##	[601,]	-3.040832e+11	-3.207516e+11	-6.994913e+14	-2.721373e+09
##	[602,]	-2.630921e+11	-2.269782e+11	-5.298683e+14	-1.822363e+09
##	[603,]	-4.343999e+09	-4.357807e+09	-8.835959e+12	-6.634008e+07
##	[604,]	-5.147820e+06	-4.652697e+06	-4.388571e+10	-3.000980e+06
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##	[613,]	-3.357004e+11	-2.418563e+11	-6.999843e+14	-2.624925e+09
##	[614,]	-2.491351e+11	-1.899766e+11	-5.302418e+14	-2.014083e+09
##	[615,]	-4.511239e+09	-3.444278e+09	-8.842187e+12	-6.601194e+07
##	[616,]	-5.771336e+06	-4.333338e+06	-4.391664e+10	-3.039929e+06
##	[617,]	-6.221939e+05	-4.569227e+05	-1.879789e+10	-3.548983e+06
##	[618,]	-8.562731e+07	-8.299038e+07	-1.168927e+11	-8.247338e+06
##	[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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## [638,] -2.339856e+11 -2.269761e+11 -5.309891e+14 -2.065232e+09
## [639,] -4.413561e+09 -3.953399e+09 -8.854649e+12 -6.826667e+07
## [640,] -6.235119e+06 -3.443382e+06 -4.400950e+10 -2.993487e+06
## [641,] -5.012758e+05 -6.737792e+05 -1.883763e+10 -3.561328e+06
## [642,] -8.791356e+07 -9.199914e+07 -1.172223e+11 -8.155184e+06
## [643,] -3.389446e+11 -2.898591e+11 -7.019582e+14 -2.548772e+09
## [644,] -2.300768e+11 -2.193113e+11 -5.317370e+14 -1.984793e+09
## [645,] -4.667638e+09 -3.953591e+09 -8.867120e+12 -6.985768e+07
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## [647,] -6.968805e+05 -3.891846e+05 -1.885089e+10 -3.562361e+06
## [648,] -9.154061e+07 -8.524139e+07 -1.172223e+11 -8.168859e+06
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## [650,] -2.515673e+11 -2.117795e+11 -5.317370e+14 -2.094689e+09
## [651,] -4.316952e+09 -3.823066e+09 -8.867120e+12 -6.811905e+07
## [652,] -4.537123e+06 -5.646164e+06 -4.407147e+10 -2.998778e+06
## [653,] -7.540661e+05 -5.201256e+05 -1.886416e+10 -3.594949e+06
## [654,] -9.086952e+07 -8.089315e+07 -1.173048e+11 -8.673283e+06
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## [805,] -3.186222e+11 -2.701197e+11 -7.118692e+14 -2.690298e+09
## [806,] -2.531819e+11 -2.192970e+11 -5.392446e+14 -2.168174e+09
## [807,] -4.541874e+09 -4.088261e+09 -8.992316e+12 -7.276720e+07
## [808,] -5.577378e+06 -5.577378e+06 -4.466229e+10 -3.075375e+06
## [809,] -5.491091e+05 -4.993949e+05 -1.911705e+10 -3.618418e+06
## [810,] -9.160408e+07 -7.901284e+07 -1.188774e+11 -8.304660e+06
```

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## [811,] -3.281620e+11 -2.798943e+11 -7.118692e+14 -2.642174e+09
## [812,] -2.458884e+11 -2.192970e+11 -5.392446e+14 -2.005166e+09
## [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
## [824,] -2.507366e+11 -2.043635e+11 -5.403753e+14 -1.631874e+09
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## [826,] -5.996870e+06 -3.655268e+06 -4.475594e+10 -3.104409e+06
## [827,] -7.504342e+05 -4.294560e+05 -1.915714e+10 -3.657104e+06
## [828,] -9.073379e+07 -8.336671e+07 -1.191266e+11 -8.730104e+06
## [829,] -3.410970e+11 -2.798911e+11 -7.138598e+14 -2.565770e+09
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## [832,] -5.633534e+06 -3.104474e+06 -4.478718e+10 -3.026131e+06
## [833,] -4.545292e+05 -3.666393e+05 -1.917051e+10 -3.505888e+06
## [834,] -9.304256e+07 -7.906719e+07 -1.192098e+11 -8.453984e+06
## [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
## [837,] -4.542286e+09 -3.696962e+09 -9.017461e+12 -7.210659e+07
## [838,] -5.115001e+06 -4.244717e+06 -4.478718e+10 -3.002823e+06
## [839,] -6.665978e+05 -3.666393e+05 -1.917051e+10 -3.603931e+06
## [840,] -1.071613e+08 -9.006567e+07 -1.192098e+11 -8.509744e+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
## [846,] -8.964092e+07 -7.698022e+07 -1.193762e+11 -8.310396e+06
## [847,] -3.292254e+11 -2.701149e+11 -7.148561e+14 -2.344023e+09
## [848,] -2.450800e+11 -2.117612e+11 -5.415072e+14 -2.041240e+09
## [849,] -4.347123e+09 -3.825523e+09 -9.030046e+12 -6.810147e+07
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## [854,] -2.515466e+11 -2.043607e+11 -5.418848e+14 -1.990186e+09
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## [868,] -5.829491e+06 -3.927811e+06 -4.494353e+10 -3.149638e+06
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## [922,] -4.739865e+06 -5.516189e+06 -4.519426e+10 -2.985581e+06
## [923,] -8.724872e+05 -3.547080e+05 -1.934475e+10 -3.686822e+06
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## [926,] -2.507251e+11 -2.269469e+11 -5.460465e+14 -2.552739e+09
```

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## [940,] -7.755431e+06 -4.188231e+06 -4.535132e+10 -3.082025e+06
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## [942,] -9.424995e+07 -7.720834e+07 -1.207951e+11 -8.295608e+06
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## [999,] -4.475086e+09 -3.958782e+09 -9.207164e+12 -6.880188e+07
## [1000,] -5.313350e+06 -4.777471e+06 -4.576095e+10 -2.945620e+06
## [1001,] -7.086672e+05 -2.339704e+05 -1.958732e+10 -3.718989e+06
## [1002,] -9.419565e+07 -8.163711e+07 -1.218017e+11 -8.543258e+06
## [1003,] -2.888112e+11 -2.700919e+11 -7.293807e+14 -3.417398e+09
## [1004,] -2.434545e+11 -2.117408e+11 -5.525097e+14 -2.143094e+09
## [1005,] -4.545479e+09 -3.828265e+09 -9.213521e+12 -7.038625e+07
## [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
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## [1022,] -2.572490e+11 -2.347251e+11 -5.544179e+14 -1.995176e+09
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## [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
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## [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
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## [1038,] -9.710901e+07 -8.173380e+07 -1.223908e+11 -8.793183e+06
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## [1042,] -6.066532e+06 -5.423260e+06 -4.601395e+10 -3.213052e+06
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## [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
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## [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
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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
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## [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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## [1097,] -9.474933e+05 -1.797336e+05 -1.977702e+10 -3.671473e+06
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## [1099,] -3.871485e+11 -2.604806e+11 -7.364449e+14 -3.138758e+09
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## [1104,] -9.233690e+07 -7.969354e+07 -1.230658e+11 -8.442674e+06
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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
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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
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## [1123,] -3.323986e+11 -2.510496e+11 -7.394828e+14 -2.590205e+09
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## [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
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## [1139,] -5.131174e+05 -5.061133e+05 -1.989946e+10 -3.800462e+06
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## [1141,] -3.542367e+11 -3.756290e+11 -7.410041e+14 -2.922543e+09
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## [1145,] -6.227486e+05 -2.646309e+05 -1.991309e+10 -3.903594e+06
## [1146,] -8.995490e+07 -7.981637e+07 -1.238274e+11 -8.671933e+06
## [1147,] -3.421365e+11 -2.798458e+11 -7.420192e+14 -2.580339e+09
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## [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
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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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## [1190,] -2.426291e+11 -2.117169e+11 -5.655501e+14 -2.007710e+09
## [1191,] -4.676936e+09 -3.962148e+09 -9.430980e+12 -6.665806e+07
## [1192,] -5.748742e+06 -4.039449e+06 -4.687297e+10 -3.306401e+06
## [1193,] -5.353575e+05 -4.266564e+05 -2.006330e+10 -3.898040e+06
## [1194,] -8.853109e+07 -8.430425e+07 -1.247615e+11 -8.643935e+06
## [1195,] -3.345381e+11 -2.798377e+11 -7.471050e+14 -2.694419e+09
## [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
## [1206,] -9.361363e+07 -8.002131e+07 -1.251020e+11 -8.782074e+06
## [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
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## [1216,] -4.803562e+06 -4.968409e+06 -4.706494e+10 -3.231290e+06
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## [1220,] -2.394379e+11 -1.970457e+11 -5.682538e+14 -2.102832e+09
## [1221,] -4.217147e+09 -3.962821e+09 -9.476066e+12 -7.322301e+07
## [1222,] -5.584887e+06 -3.727500e+06 -4.706494e+10 -3.228609e+06
## [1223,] -6.809739e+05 -4.206879e+05 -2.014547e+10 -3.810103e+06
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## [1225,] -3.302334e+11 -2.604588e+11 -7.506754e+14 -3.793969e+09
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## [1228,] -3.724550e+06 -7.564083e+06 -4.709697e+10 -3.188598e+06
## [1229,] -3.354265e+05 -5.564493e+05 -2.015918e+10 -3.683918e+06
## [1230,] -9.250350e+07 -8.221810e+07 -1.253577e+11 -8.675416e+06
## [1231,] -3.259627e+11 -2.700586e+11 -7.506754e+14 -2.617023e+09
## [1232,] -2.284515e+11 -2.269033e+11 -5.690274e+14 -2.185320e+09
## [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
## [1236,] -1.022126e+08 -8.664400e+07 -1.255284e+11 -9.011882e+06
## [1237,] -3.185540e+11 -2.700570e+11 -7.516971e+14 -2.664760e+09
## [1238,] -2.474399e+11 -2.269025e+11 -5.694144e+14 -2.036202e+09
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## [1241,] -6.284056e+05 -2.483788e+05 -2.020034e+10 -3.864361e+06
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## [1379,] -6.461195e+05 -2.304355e+05 -2.053115e+10 -3.890217e+06
## [1380,] -9.382579e+07 -8.043197e+07 -1.276708e+11 -8.847140e+06
## [1381,] -3.206137e+11 -3.227281e+11 -2.704120e+13 -1.669627e+09
## [1382,] -2.460263e+11 -2.444195e+11 -2.048385e+13 -1.226526e+09
## [1383,] -4.184810e+09 -3.363027e+09 -3.415838e+11 -2.521186e+07
## [1384,] -1.761314e+07 -1.405742e+07 -1.702636e+09 -1.165854e+04
## [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
```

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## [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
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## [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
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## [1418,] -2.354621e+11 -2.192204e+11 -5.803046e+14 -1.612405e+09
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## [1426,] -4.661404e+06 -3.920545e+06 -4.812779e+10 -3.328023e+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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## [1443,] -4.695764e+09 -3.707004e+09 -9.709633e+12 -7.297752e+07
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## [1448,] -2.547300e+11 -2.116860e+11 -5.826517e+14 -2.063230e+09
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## [1451,] -5.010811e+05 -3.254818e+05 -2.066978e+10 -3.971091e+06
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## [1462,] -5.333943e+06 -3.896374e+06 -4.838724e+10 -3.438301e+06
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## [1468,] -4.406561e+06 -5.855793e+06 -4.845221e+10 -3.298825e+06
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## [1497,] -4.626083e+09 -3.708586e+09 -9.820918e+12 -6.740881e+07
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## [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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## [1554,] -9.320065e+07 -8.092615e+07 -1.307878e+11 -8.997180e+06
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## [1570,] -5.695952e+06 -4.423517e+06 -4.923526e+10 -3.395948e+06
## [1571,] -4.905996e+05 -3.006881e+05 -2.107445e+10 -4.050022e+06
## [1572,] -9.721506e+07 -8.981059e+07 -1.310492e+11 -8.825116e+06
## [1573,] -3.132607e+11 -2.998450e+11 -7.847575e+14 -2.253555e+09
## [1574,] -2.401815e+11 -2.116642e+11 -5.948535e+14 -1.973642e+09
## [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
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## [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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## [1608,] -9.424579e+07 -8.103617e+07 -1.314855e+11 -8.976435e+06
## [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
## [1611,] -4.543113e+09 -3.839052e+09 -9.952652e+12 -7.364090e+07
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## [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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## [1616,] -2.473859e+11 -2.191896e+11 -5.972297e+14 -2.031309e+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
## [1626,] -9.851982e+07 -9.452285e+07 -1.317477e+11 -9.177718e+06
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## [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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## [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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```

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## [1745,] -4.493101e+05 -3.274028e+05 -2.153970e+10 -4.178184e+06
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## [1759,] -3.333621e+11 -2.603769e+11 -8.052526e+14 -2.561434e+09
## [1760,] -2.441446e+11 -2.116375e+11 -6.099830e+14 -1.949514e+09
## [1761,] -4.574786e+09 -3.973026e+09 -1.017193e+13 -7.104324e+07
## [1762,] -5.554591e+06 -3.421297e+06 -5.052111e+10 -3.624967e+06
## [1763,] -3.924713e+05 -3.802742e+05 -2.162484e+10 -4.178878e+06
## [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
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## [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
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## [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
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## [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
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## [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
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## [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
## [1839,] -4.067580e+09 -4.242987e+09 -1.028583e+13 -7.073325e+07
## [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
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## [1849,] -3.279860e+11 -3.311964e+11 -8.153331e+14 -2.722803e+09
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## [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
```

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## [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
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## [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
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## [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
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## [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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## [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
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## [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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## [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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## [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
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## [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
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## [2054,] -2.574187e+11 -2.286392e+11 -2.070470e+13 -1.203745e+09
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## [2065,] -3.323260e+11 -3.018946e+11 -2.733274e+13 -1.609067e+09
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## [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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## [2085,] -4.681330e+09 -3.979386e+09 -1.061766e+13 -7.296485e+07
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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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## [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
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## [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
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## [2110,] -4.923952e+06 -4.070840e+06 -5.297251e+10 -3.590389e+06
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## [2112,] -9.867218e+07 -8.692020e+07 -1.409966e+11 -9.598692e+06
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## [2125,] -3.290044e+11 -2.896304e+11 -8.459507e+14 -3.131311e+09
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## [2139,] -4.639815e+09 -4.113805e+09 -1.070658e+13 -7.170955e+07
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## [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
```



```
## [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
## [2173,] -3.141944e+11 -2.796744e+11 -8.535572e+14 -2.639970e+09
## [2174,] -2.578924e+11 -2.041777e+11 -6.465740e+14 -1.929168e+09
## [2175,] -4.683839e+09 -3.850708e+09 -1.078212e+13 -7.417719e+07
## [2176,] -4.542984e+06 -3.725140e+06 -5.355172e+10 -3.774764e+06
## [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
## [2184,] -1.084479e+08 -7.636198e+07 -1.426292e+11 -9.841142e+06
## [2185,] -3.365179e+11 -2.997362e+11 -8.541018e+14 -3.288409e+09
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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
## [2190,] -9.706534e+07 -8.277889e+07 -1.427202e+11 -9.466667e+06
## [2191,] -3.311322e+11 -3.419452e+11 -8.546466e+14 -3.213925e+09
## [2192,] -2.611961e+11 -2.063807e+11 -6.478120e+14 -2.030011e+09
## [2193,] -4.457732e+09 -4.115177e+09 -1.080276e+13 -7.100616e+07
## [2194,] -5.323923e+06 -4.006344e+06 -5.368846e+10 -3.903642e+06
## [2195,] -3.354442e+05 -3.527084e+05 -2.298057e+10 -4.395045e+06
## [2196,] -1.013867e+08 -8.499887e+07 -1.429023e+11 -9.765576e+06
## [2197,] -3.463173e+11 -3.311304e+11 -8.557367e+14 -2.864516e+09
## [2198,] -2.306383e+11 -2.424733e+11 -6.482250e+14 -2.325019e+09
## [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
## [2201,] -3.576449e+05 -1.575295e+05 -2.299522e+10 -4.472638e+06
## [2202,] -9.453354e+07 -8.501296e+07 -1.429933e+11 -9.495523e+06
```

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## [2203,] -3.183832e+11 -3.311295e+11 -8.562820e+14 -2.601410e+09
## [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
## [2210,] -2.720829e+11 -2.927716e+11 -6.494646e+14 -2.332627e+09
## [2211,] -4.088755e+09 -3.851372e+09 -1.083032e+13 -8.684779e+07
## [2212,] -4.777471e+06 -3.152590e+06 -5.379113e+10 -3.674508e+06
## [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
## [2215,] -3.204877e+11 -2.796680e+11 -8.579190e+14 -2.924356e+09
## [2216,] -2.562403e+11 -2.041715e+11 -6.502917e+14 -2.051584e+09
## [2217,] -3.877588e+09 -4.528503e+09 -1.084411e+13 -9.485592e+07
## [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
## [2220,] -1.002772e+08 -8.508343e+07 -1.434491e+11 -9.704579e+06
## [2221,] -3.173280e+11 -2.896107e+11 -8.590112e+14 -3.171106e+09
## [2222,] -2.628515e+11 -2.041708e+11 -6.507054e+14 -2.231661e+09
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## [2224,] -4.670251e+06 -3.414516e+06 -5.389390e+10 -3.904077e+06
## [2225,] -2.971953e+05 -2.412709e+05 -2.306851e+10 -4.490892e+06
## [2226,] -9.554129e+07 -8.072555e+07 -1.434491e+11 -9.526470e+06
## [2227,] -3.685979e+11 -2.796664e+11 -8.590112e+14 -2.904066e+09
## [2228,] -2.806086e+11 -2.041708e+11 -6.507054e+14 -2.216359e+09
## [2229,] -5.020218e+09 -4.115864e+09 -1.085101e+13 -7.612429e+07
## [2230,] -6.649815e+06 -2.885518e+06 -5.389390e+10 -3.830744e+06
## [2231,] -3.589439e+05 -2.412709e+05 -2.306851e+10 -4.480502e+06
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## [2234,] -2.416706e+11 -1.969060e+11 -6.507054e+14 -2.140640e+09
## [2235,] -4.713690e+09 -3.851752e+09 -1.085791e+13 -6.918077e+07
## [2236,] -4.666949e+06 -3.141745e+06 -5.392818e+10 -3.904149e+06
## [2237,] -3.406333e+05 -4.065351e+05 -2.308318e+10 -4.396904e+06
## [2238,] -9.862178e+07 -9.184969e+07 -1.435403e+11 -9.649773e+06
## [2239,] -3.225990e+11 -2.796655e+11 -8.595576e+14 -2.863943e+09
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## [2241,] -4.771352e+09 -4.115962e+09 -1.085791e+13 -6.952943e+07
## [2242,] -5.196758e+06 -2.882922e+06 -5.392818e+10 -3.680510e+06
## [2243,] -6.549699e+05 -1.178263e+05 -2.308318e+10 -4.388678e+06
## [2244,] -9.699519e+07 -8.293192e+07 -1.437229e+11 -9.681598e+06
## [2245,] -3.225973e+11 -2.896082e+11 -8.606508e+14 -2.534670e+09
## [2246,] -2.244409e+11 -2.345437e+11 -6.519474e+14 -1.985710e+09
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## [2250,] -1.027501e+08 -9.653936e+07 -1.438142e+11 -9.986588e+06
## [2251,] -3.332703e+11 -2.997253e+11 -8.611977e+14 -3.297966e+09
## [2252,] -2.529613e+11 -2.267511e+11 -6.527761e+14 -2.316393e+09
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## [2254,] -4.816030e+06 -3.130919e+06 -5.406540e+10 -3.880896e+06
## [2255,] -3.902914e+05 -1.921205e+05 -2.314192e+10 -4.494611e+06
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## [2257,] -3.332676e+11 -2.796607e+11 -8.628394e+14 -2.677074e+09
## [2258,] -2.505178e+11 -2.190902e+11 -6.536053e+14 -1.999921e+09
## [2259,] -4.685722e+09 -4.252051e+09 -1.090628e+13 -7.387357e+07
## [2260,] -5.552286e+06 -4.266155e+06 -5.416843e+10 -3.828400e+06
```

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## [2261,] -3.176132e+05 -1.141828e+05 -2.318602e+10 -4.466932e+06
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## [2263,] -3.311181e+11 -3.529174e+11 -8.633869e+14 -3.066332e+09
## [2264,] -2.282959e+11 -2.424620e+11 -6.544350e+14 -1.985301e+09
## [2265,] -4.557752e+09 -3.597038e+09 -1.091320e+13 -6.928250e+07
## [2266,] -5.443779e+06 -3.389147e+06 -5.420280e+10 -3.966871e+06
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## [2268,] -9.567578e+07 -9.196690e+07 -1.442713e+11 -9.297008e+06
## [2269,] -3.279073e+11 -2.698886e+11 -8.639347e+14 -2.657662e+09
## [2270,] -2.480862e+11 -1.968999e+11 -6.544350e+14 -2.043551e+09
## [2271,] -4.417528e+09 -3.983533e+09 -1.091320e+13 -7.015642e+07
## [2272,] -4.802624e+06 -2.862201e+06 -5.420280e+10 -3.934259e+06
## [2273,] -1.894504e+05 -6.851167e+05 -2.320073e+10 -4.373196e+06
## [2274,] -9.637936e+07 -7.871155e+07 -1.442713e+11 -9.784871e+06
## [2275,] -3.375823e+11 -2.997195e+11 -8.650307e+14 -3.705273e+09
## [2276,] -2.513266e+11 -1.827634e+11 -6.556806e+14 -1.787864e+09
## [2277,] -4.293600e+09 -3.983919e+09 -1.094090e+13 -8.668559e+07
## [2278,] -4.987094e+06 -3.109323e+06 -5.434037e+10 -3.910916e+06
## [2279,] -2.558217e+05 -4.589911e+05 -2.325961e+10 -4.466493e+06
## [2280,] -9.598487e+07 -8.308508e+07 -1.447291e+11 -9.816285e+06
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## [2283,] -4.643563e+09 -3.853080e+09 -1.095476e+13 -7.834934e+07
## [2284,] -3.824788e+06 -3.942363e+06 -5.440922e+10 -3.869873e+06
## [2285,] -4.838365e+05 -2.796173e+05 -2.328908e+10 -4.489571e+06
## [2286,] -9.883438e+07 -8.529501e+07 -1.448207e+11 -9.881167e+06
## [2287,] -3.354162e+11 -3.204730e+11 -8.672248e+14 -2.892796e+09
## [2288,] -2.306229e+11 -2.586975e+11 -6.569273e+14 -2.339138e+09
## [2289,] -4.432062e+09 -3.853080e+09 -1.095476e+13 -7.853473e+07
## [2290,] -4.588833e+06 -5.216007e+06 -5.440922e+10 -3.834742e+06
## [2291,] -2.396521e+05 -3.339058e+05 -2.328908e+10 -4.448088e+06
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## [2301,] -4.672344e+09 -3.597772e+09 -1.096864e+13 -7.745254e+07
## [2302,] -4.550414e+06 -3.645924e+06 -5.447811e+10 -3.952614e+06
## [2303,] -5.152653e+05 -5.389646e+04 -2.333332e+10 -4.553564e+06
## [2304,] -1.003130e+08 -8.314081e+07 -1.450958e+11 -9.641267e+06
## [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
## [2307,] -4.446416e+09 -3.597955e+09 -1.098252e+13 -7.187279e+07
## [2308,] -4.543896e+06 -3.093175e+06 -5.454705e+10 -3.932029e+06
## [2309,] -5.001944e+05 -5.354227e+04 -2.334808e+10 -4.421704e+06
## [2310,] -9.867248e+07 -8.536560e+07 -1.452794e+11 -9.561748e+06
## [2311,] -3.173108e+11 -2.997120e+11 -8.699714e+14 -3.211499e+09
## [2312,] -2.368934e+11 -2.190802e+11 -6.594243e+14 -2.057413e+09
## [2313,] -4.011162e+09 -4.672762e+09 -1.099640e+13 -7.332568e+07
## [2314,] -3.437939e+06 -3.924178e+06 -5.461603e+10 -3.803108e+06
## [2315,] -1.850988e+05 -2.250387e+05 -2.339238e+10 -4.381919e+06
## [2316,] -9.704546e+07 -8.319656e+07 -1.454630e+11 -9.637955e+06
## [2317,] -3.289641e+11 -2.602818e+11 -8.710712e+14 -2.647039e+09
## [2318,] -2.554020e+11 -1.968911e+11 -6.598410e+14 -1.891577e+09
```

```
## [2319,] -4.446722e+09 -3.724891e+09 -1.100335e+13 -7.441830e+07
## [2320,] -4.791779e+06 -2.583382e+06 -5.465054e+10 -3.861579e+06
## [2321,] -3.986227e+05 -7.737046e+04 -2.339238e+10 -4.585508e+06
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## [2323,] -3.584631e+11 -2.508589e+11 -8.710712e+14 -3.127378e+09
## [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
## [2328,] -9.496495e+07 -8.322444e+07 -1.456468e+11 -9.826678e+06
## [2329,] -3.246999e+11 -2.602802e+11 -8.721717e+14 -2.792684e+09
## [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
## [2332,] -4.946224e+06 -3.077069e+06 -5.475412e+10 -3.829620e+06
## [2333,] -3.714298e+05 -1.398581e+05 -2.343672e+10 -4.561740e+06
## [2334,] -9.709064e+07 -8.106919e+07 -1.457387e+11 -9.719229e+06
## [2335,] -3.278933e+11 -2.796461e+11 -8.727223e+14 -2.714357e+09
## [2336,] -2.529459e+11 -2.041535e+11 -6.610916e+14 -1.984212e+09
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## [2338,] -4.749186e+06 -3.077069e+06 -5.475412e+10 -3.950232e+06
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## [2342,] -2.472658e+11 -1.968884e+11 -6.615088e+14 -2.168919e+09
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## [2354,] -2.661670e+11 -2.115475e+11 -6.623435e+14 -1.814367e+09
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## [2376,] -6.348135e+07 -4.914299e+07 -4.564384e+09 -9.124189e+05
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## [2483,] -4.626429e+05 -2.535850e+05 -2.377804e+10 -4.580253e+06
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## [2523,] -4.478364e+09 -4.394709e+09 -1.125493e+13 -8.460994e+07
## [2524,] -5.164756e+06 -4.733479e+06 -5.593496e+10 -4.102377e+06
## [2525,] -4.125990e+05 -2.451901e+05 -2.394215e+10 -4.720175e+06
## [2526,] -9.807677e+07 -8.371313e+07 -1.488818e+11 -1.032307e+07
## [2527,] -3.506601e+11 -2.698489e+11 -8.915435e+14 -3.229273e+09
## [2528,] -2.384461e+11 -2.345016e+11 -6.757705e+14 -1.917362e+09
## [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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## [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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## [2562,] -9.888026e+07 -8.379705e+07 -1.494399e+11 -9.790560e+06
## [2563,] -3.183229e+11 -2.602482e+11 -8.948857e+14 -2.838814e+09
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## [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
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## [2572,] -3.935690e+06 -3.504338e+06 -5.617964e+10 -4.036698e+06
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## [2579,] -2.782936e+05 -1.929252e+05 -2.407685e+10 -4.671314e+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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## [2643,] -4.397445e+09 -4.124202e+09 -1.144548e+13 -7.671090e+07
## [2644,] -5.004447e+06 -2.666576e+06 -5.688166e+10 -4.146799e+06
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## [2657,] -3.716161e+05 -1.399724e+05 -2.439261e+10 -4.807394e+06
## [2658,] -9.430159e+07 -9.084767e+07 -1.516829e+11 -1.015579e+07
## [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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```

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## [2680,] -4.711162e+06 -3.421862e+06 -5.719899e+10 -4.168762e+06
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## [2689,] -3.539411e+11 -2.698156e+11 -9.150705e+14 -2.976554e+09
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## [2698,] -4.311605e+06 -3.404921e+06 -5.741103e+10 -4.066302e+06
## [2699,] -7.653953e+04 -3.149317e+05 -2.457397e+10 -4.623516e+06
## [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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## [2707,] -3.259091e+11 -2.623168e+11 -2.743027e+13 -1.616491e+09
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## [2712,] -6.011911e+07 -4.916442e+07 -4.596987e+09 -8.457354e+05
## [2713,] -3.216648e+11 -2.917373e+11 -2.762586e+13 -1.661645e+09
## [2714,] -2.508735e+11 -1.986602e+11 -2.092673e+13 -1.243307e+09
## [2715,] -4.226129e+09 -3.363559e+09 -3.489692e+11 -2.568048e+07
## [2716,] -1.671640e+07 -1.402878e+07 -1.733231e+09 -9.677312e+03
## [2717,] -6.789660e+06 -5.594716e+06 -7.418847e+08 -4.863261e+04
## [2718,] -6.218973e+07 -5.258899e+07 -4.613332e+09 -8.895111e+05
## [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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## [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
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## [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
## [2771,] -3.848682e+05 -6.878132e+04 -2.466490e+10 -4.863571e+06
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## [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
## [2776,] -4.508391e+06 -2.858582e+06 -5.765891e+10 -4.121145e+06
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## [2778,] -9.835970e+07 -8.222918e+07 -1.535648e+11 -1.026877e+07
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## [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
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## [2789,] -2.948173e+05 -1.271308e+05 -2.474080e+10 -4.822089e+06
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## [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
## [2800,] -4.388230e+06 -2.592233e+06 -5.794286e+10 -4.262217e+06
## [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
## [2808,] -1.016235e+08 -8.676923e+07 -1.545101e+11 -1.007326e+07
## [2809,] -3.440148e+11 -2.698013e+11 -9.252473e+14 -2.894274e+09
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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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## [2820,] -1.057821e+08 -8.238170e+07 -1.546048e+11 -1.052360e+07
## [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
## [2826,] -9.901739e+07 -8.458232e+07 -1.546995e+11 -1.028920e+07
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## [2829,] -4.712014e+09 -3.863237e+09 -1.170920e+13 -7.868542e+07
## [2830,] -4.494643e+06 -4.526322e+06 -5.815628e+10 -4.176879e+06
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## [2832,] -1.014286e+08 -8.025115e+07 -1.547942e+11 -1.002710e+07
## [2833,] -3.353215e+11 -2.602038e+11 -9.269489e+14 -2.706639e+09
## [2834,] -2.471929e+11 -2.040865e+11 -7.021686e+14 -2.102164e+09
## [2835,] -4.597762e+09 -3.734225e+09 -1.170920e+13 -7.465339e+07
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## [2839,] -3.130358e+11 -2.996250e+11 -9.280842e+14 -3.266102e+09
## [2840,] -2.220539e+11 -1.968219e+11 -7.030286e+14 -2.394172e+09
```

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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
## [2843,] -3.108796e+05 -8.854432e+04 -2.493869e+10 -4.896163e+06
## [2844,] -9.553711e+07 -9.137282e+07 -1.550786e+11 -1.030882e+07
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## [2854,] -3.954875e+06 -2.807137e+06 -5.837008e+10 -4.260046e+06
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## [2856,] -1.044353e+08 -8.468073e+07 -1.553633e+11 -1.020852e+07
## [2857,] -3.278022e+11 -2.895046e+11 -9.309254e+14 -3.025265e+09
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## [2859,] -4.360339e+09 -3.608046e+09 -1.175943e+13 -7.402370e+07
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## [2861,] -2.705759e+05 -6.024646e+04 -2.499974e+10 -4.924929e+06
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## [2865,] -4.332838e+09 -3.863997e+09 -1.176661e+13 -7.367706e+07
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## [2869,] -3.396449e+11 -2.697918e+11 -9.320631e+14 -2.496811e+09
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## [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
## [2880,] -8.874894e+07 -1.008602e+08 -1.557433e+11 -1.069246e+07
## [2881,] -3.214268e+11 -2.795589e+11 -9.332015e+14 -2.590664e+09
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## [2883,] -5.019788e+09 -4.542295e+09 -1.178818e+13 -7.920677e+07
## [2884,] -4.614667e+06 -3.046583e+06 -5.858429e+10 -4.217506e+06
## [2885,] -4.997189e+05 -1.149069e+05 -2.509146e+10 -4.832492e+06
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## [2887,] -3.342306e+11 -2.601929e+11 -9.349104e+14 -2.599926e+09
## [2888,] -2.528606e+11 -2.040769e+11 -7.081995e+14 -2.330203e+09
## [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
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## [2893,] -3.439987e+11 -3.203674e+11 -9.354804e+14 -3.127974e+09
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```

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## [2902,] -4.569604e+06 -3.577960e+06 -5.872731e+10 -4.251572e+06
## [2903,] -3.162367e+05 -8.273129e+04 -2.513738e+10 -4.970801e+06
## [2904,] -9.832454e+07 -8.263157e+07 -1.563141e+11 -1.021147e+07
## [2905,] -3.320771e+11 -2.894972e+11 -9.360505e+14 -2.580797e+09
## [2906,] -2.383879e+11 -2.528591e+11 -7.090631e+14 -2.108486e+09
## [2907,] -4.713693e+09 -4.278697e+09 -1.182417e+13 -7.306457e+07
## [2908,] -4.314906e+06 -2.535948e+06 -5.876309e+10 -4.504420e+06
## [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
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## [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
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## [2923,] -3.550136e+11 -2.601882e+11 -9.383329e+14 -2.983309e+09
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## [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
## [2933,] -2.580061e+05 -3.391898e+04 -2.524469e+10 -4.981533e+06
## [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
## [2936,] -2.383820e+11 -2.266485e+11 -7.125230e+14 -2.070846e+09
## [2937,] -4.743322e+09 -3.865517e+09 -1.188187e+13 -7.370727e+07
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## [2940,] -1.001303e+08 -9.869859e+07 -1.571723e+11 -1.055655e+07
## [2941,] -3.407169e+11 -2.601835e+11 -9.417616e+14 -2.891890e+09
## [2942,] -2.569468e+11 -2.585941e+11 -7.133893e+14 -2.329318e+09
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## [2945,] -1.866801e+05 -1.824651e+05 -2.529075e+10 -4.941480e+06
## [2946,] -9.918992e+07 -9.635026e+07 -1.572678e+11 -1.085914e+07
## [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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## [2952,] -8.944598e+07 -9.172377e+07 -1.573634e+11 -1.046559e+07
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## [2957,] -3.006043e+05 -5.262682e+04 -2.532148e+10 -4.941731e+06
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## [2959,] -3.374580e+11 -2.601812e+11 -9.434783e+14 -2.753017e+09
## [2960,] -2.227996e+11 -2.504077e+11 -7.146897e+14 -1.925488e+09
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## [2962,] -4.033677e+06 -3.001404e+06 -5.919332e+10 -4.209601e+06
## [2963,] -2.997670e+05 -1.412331e+05 -2.533685e+10 -4.838796e+06
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## [2992,] -5.368731e+06 -3.808785e+06 -5.940903e+10 -4.167314e+06
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## [2995,] -3.505705e+11 -2.601757e+11 -9.474901e+14 -2.921213e+09
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## [3006,] -9.604567e+07 -8.511726e+07 -1.583203e+11 -1.036816e+07
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```

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## [3019,] -3.277734e+11 -2.795354e+11 -9.497863e+14 -2.578934e+09
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## [3021,] -4.391369e+09 -3.867037e+09 -1.199768e+13 -7.391735e+07
## [3022,] -4.488295e+06 -2.718233e+06 -5.962513e+10 -4.290458e+06
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## [3035,] -7.333018e+06 -6.064725e+06 -7.445179e+08 -4.166616e+04
## [3036,] -6.201317e+07 -4.918585e+07 -4.629706e+09 -9.000121e+05
## [3037,] -3.486361e+11 -2.623145e+11 -2.772391e+13 -1.542237e+09
## [3038,] -2.648769e+11 -2.209447e+11 -2.100100e+13 -1.136942e+09
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## [3041,] -7.148213e+06 -5.361509e+06 -7.445179e+08 -4.918756e+04
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## [3069,] -4.391774e+09 -4.405657e+09 -1.202672e+13 -7.415006e+07
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## [3072,] -9.828938e+07 -8.970634e+07 -1.590879e+11 -1.052370e+07
```



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## [3089,] -3.436189e+05 -6.886150e+04 -2.564527e+10 -5.019926e+06
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## [3092,] -2.503908e+11 -2.040513e+11 -7.242623e+14 -2.039557e+09
## [3093,] -4.717366e+09 -3.738989e+09 -1.207763e+13 -8.050127e+07
## [3094,] -4.743859e+06 -3.204905e+06 -5.998616e+10 -4.331480e+06
## [3095,] -1.396639e+05 -6.806178e+04 -2.567621e+10 -5.009194e+06
## [3096,] -9.980976e+07 -9.207538e+07 -1.596648e+11 -1.074089e+07
## [3097,] -3.288309e+11 -2.507426e+11 -9.566918e+14 -2.741405e+09
## [3098,] -2.463475e+11 -1.967880e+11 -7.246990e+14 -1.931069e+09
## [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
## [3122,] -2.415353e+11 -2.040465e+11 -7.273215e+14 -1.952111e+09
## [3123,] -4.632225e+09 -3.868748e+09 -1.212864e+13 -7.542123e+07
## [3124,] -4.182603e+06 -2.922499e+06 -6.027577e+10 -4.285647e+06
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## [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
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## [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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## [3136,] -3.995462e+06 -2.668073e+06 -6.034829e+10 -4.372697e+06
## [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
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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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## [3156,] -9.093567e+07 -9.933731e+07 -1.612084e+11 -1.089215e+07
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## [3158,] -2.479492e+11 -2.189600e+11 -7.312642e+14 -2.053128e+09
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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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## [3200,] -2.643605e+11 -2.189521e+11 -7.360976e+14 -2.217245e+09
## [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
## [3203,] -2.601687e+05 -3.655768e+04 -2.609579e+10 -5.146392e+06
## [3204,] -9.202670e+07 -9.019916e+07 -1.623710e+11 -1.107189e+07
## [3205,] -3.266730e+11 -2.697362e+11 -9.723204e+14 -2.116020e+09
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## [3210,] -9.044113e+07 -9.021367e+07 -1.624680e+11 -1.066665e+07
## [3211,] -3.330956e+11 -3.098486e+11 -9.729017e+14 -2.857483e+09
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## [3214,] -4.053837e+06 -3.964242e+06 -6.107581e+10 -4.421151e+06
## [3215,] -4.484500e+05 -8.238001e+04 -2.614262e+10 -5.074689e+06
## [3216,] -9.343894e+07 -9.717709e+07 -1.625651e+11 -1.113790e+07
## [3217,] -3.538475e+11 -2.894429e+11 -9.740647e+14 -3.111843e+09
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## [3226,] -3.718418e+06 -2.608498e+06 -6.122183e+10 -4.493892e+06
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## [3228,] -9.961167e+07 -8.359292e+07 -1.629538e+11 -1.053568e+07
## [3229,] -3.224202e+11 -2.794991e+11 -9.758106e+14 -2.613420e+09
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## [3236,] -2.431115e+11 -1.896343e+11 -7.396227e+14 -2.022523e+09
## [3237,] -4.069243e+09 -5.132350e+09 -1.233377e+13 -8.249591e+07
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## [3240,] -9.938819e+07 -8.804085e+07 -1.630510e+11 -1.076718e+07
## [3241,] -3.320145e+11 -3.098426e+11 -9.769754e+14 -2.546988e+09
## [3242,] -2.693819e+11 -2.266027e+11 -7.400640e+14 -2.411663e+09
## [3243,] -4.536017e+09 -4.002848e+09 -1.234113e+13 -7.220532e+07
## [3244,] -4.371726e+06 -2.849803e+06 -6.129491e+10 -4.579828e+06
## [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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## [3267,] -4.536635e+09 -3.615945e+09 -1.238533e+13 -7.353442e+07
## [3268,] -3.868911e+06 -2.834345e+06 -6.151441e+10 -4.557981e+06
## [3269,] -2.020936e+05 -2.247488e+05 -2.633036e+10 -5.076218e+06
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## [3278,] -2.544332e+11 -2.114154e+11 -7.431563e+14 -1.871678e+09
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## [3282,] -9.811310e+07 -9.505552e+07 -1.640251e+11 -1.096746e+07
## [3283,] -3.320066e+11 -2.697227e+11 -9.822256e+14 -2.660415e+09
## [3284,] -2.495453e+11 -2.040203e+11 -7.440410e+14 -1.767750e+09
## [3285,] -4.397042e+09 -4.579341e+09 -1.240745e+13 -7.776137e+07
## [3286,] -3.714764e+06 -2.826631e+06 -6.162431e+10 -4.406638e+06
## [3287,] -2.561619e+05 -7.593192e+04 -2.637740e+10 -5.139800e+06
## [3288,] -1.046181e+08 -8.818431e+07 -1.640251e+11 -1.094369e+07
## [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
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## [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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## [3310,] -4.700818e+06 -3.330879e+06 -6.188111e+10 -4.561949e+06
## [3311,] -1.783239e+05 -2.961794e+04 -2.648732e+10 -5.255901e+06
## [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
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## [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
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## [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
## [3322,] -4.218812e+06 -2.102146e+06 -6.199134e+10 -4.810799e+06
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## [3324,] -9.359175e+07 -9.521950e+07 -1.650998e+11 -1.076255e+07
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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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## [3415,] -3.248407e+11 -2.623121e+11 -2.801910e+13 -1.623625e+09
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## [3472,] -4.125911e+06 -3.267036e+06 -6.272866e+10 -4.602069e+06
## [3473,] -1.794097e+05 -9.055651e+04 -2.686593e+10 -5.324466e+06
## [3474,] -1.000138e+08 -8.862977e+07 -1.670630e+11 -1.113290e+07
## [3475,] -3.077371e+11 -2.894059e+11 -1.000417e+15 -3.438497e+09
## [3476,] -2.219639e+11 -2.668301e+11 -7.578213e+14 -2.521421e+09
## [3477,] -4.540135e+09 -4.414081e+09 -1.263725e+13 -8.517788e+07
## [3478,] -3.796387e+06 -3.264274e+06 -6.276564e+10 -4.471888e+06
```

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## [3479,] -1.547396e+05 -1.219535e+05 -2.688176e+10 -5.175104e+06
## [3480,] -1.005238e+08 -8.641938e+07 -1.672599e+11 -1.080222e+07
## [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
## [3495,] -4.526556e+09 -4.554766e+09 -1.267451e+13 -8.409272e+07
## [3496,] -3.987279e+06 -2.263792e+06 -6.295071e+10 -4.724944e+06
## [3497,] -1.803301e+05 -2.248224e+04 -2.694515e+10 -5.383011e+06
## [3498,] -9.212965e+07 -8.871611e+07 -1.676542e+11 -1.130792e+07
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## [3500,] -2.430761e+11 -2.189128e+11 -7.605031e+14 -2.267038e+09
## [3501,] -4.583168e+09 -3.619622e+09 -1.268197e+13 -8.353180e+07
## [3502,] -3.833760e+06 -2.981843e+06 -6.302481e+10 -4.679820e+06
## [3503,] -2.516187e+05 -3.899288e+04 -2.697687e+10 -5.297115e+06
## [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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## [3516,] -9.921092e+07 -8.877370e+07 -1.680489e+11 -1.077949e+07
## [3517,] -3.213176e+11 -2.696902e+11 -1.006321e+15 -2.599846e+09
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## [3519,] -4.597765e+09 -3.876261e+09 -1.271183e+13 -7.794484e+07
## [3520,] -4.395917e+06 -3.233972e+06 -6.317315e+10 -4.603013e+06
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## [3524,] -2.601587e+11 -2.113838e+11 -7.631896e+14 -1.854704e+09
## [3525,] -4.457126e+09 -3.747217e+09 -1.272677e+13 -7.431885e+07
## [3526,] -3.786745e+06 -2.966030e+06 -6.324739e+10 -4.587183e+06
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## [3528,] -9.712226e+07 -9.571226e+07 -1.683452e+11 -1.120730e+07
## [3529,] -3.706209e+11 -2.794546e+11 -1.008096e+15 -2.942887e+09
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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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## [3544,] -4.280435e+06 -1.810362e+06 -6.343316e+10 -4.742208e+06
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## [3555,] -4.756488e+09 -3.621093e+09 -1.280161e+13 -7.463138e+07
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## [3606,] -1.078462e+08 -9.137867e+07 -1.703275e+11 -1.136627e+07
## [3607,] -2.913877e+11 -3.416861e+11 -1.019966e+15 -3.391977e+09
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## [3618,] -9.909953e+07 -9.602650e+07 -1.704269e+11 -1.107478e+07
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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
## [3644,] -2.568352e+11 -2.188863e+11 -7.771453e+14 -2.218264e+09
## [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
## [3649,] -3.191794e+11 -3.202333e+11 -1.025927e+15 -3.083609e+09
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```

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## [3662,] -2.568306e+11 -2.188821e+11 -7.798610e+14 -2.082439e+09
## [3663,] -4.773786e+09 -3.623576e+09 -1.300478e+13 -7.589737e+07
## [3664,] -3.737893e+06 -2.624814e+06 -6.459105e+10 -4.803347e+06
## [3665,] -3.506602e+05 -1.307526e+05 -2.764727e+10 -5.429860e+06
## [3666,] -1.073550e+08 -9.161256e+07 -1.719216e+11 -1.160324e+07
## [3667,] -3.471413e+11 -2.893656e+11 -1.029512e+15 -3.689936e+09
## [3668,] -2.430430e+11 -1.967033e+11 -7.803141e+14 -2.517586e+09
## [3669,] -4.308537e+09 -4.419159e+09 -1.301233e+13 -7.500152e+07
## [3670,] -4.058762e+06 -3.127675e+06 -6.462858e+10 -4.634939e+06
## [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
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## [3685,] -3.244587e+11 -2.696568e+11 -1.031307e+15 -2.839460e+09
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## [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
## [3694,] -3.989721e+06 -3.668721e+06 -6.474122e+10 -4.758010e+06
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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
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## [3700,] -4.505796e+06 -2.374567e+06 -6.481637e+10 -4.732176e+06
## [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
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## [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
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## [3722,] -2.648745e+11 -1.914923e+11 -2.122461e+13 -1.330371e+09
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## [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
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## [3735,] -4.240246e+09 -3.364002e+09 -3.551840e+11 -2.690022e+07
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## [3742,] -1.735574e+07 -1.631543e+07 -1.770305e+09 -1.354397e+04
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## [3745,] -3.227176e+11 -2.917323e+11 -2.821677e+13 -1.593598e+09
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## [3760,] -4.021899e+06 -1.922256e+06 -6.507974e+10 -4.768496e+06
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## [3763,] -3.212717e+11 -2.506370e+11 -1.037902e+15 -3.133869e+09
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## [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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## [3779,] -1.386605e+05 -4.027059e+04 -2.793711e+10 -5.407107e+06
## [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
## [3782,] -2.527223e+11 -2.188692e+11 -7.880365e+14 -1.964451e+09
## [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
## [3790,] -3.823473e+06 -1.907453e+06 -6.534364e+10 -4.893640e+06
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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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## [3797,] -1.406135e+05 -1.005611e+04 -2.798556e+10 -5.585769e+06
## [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
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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
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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
## [3824,] -2.510861e+11 -2.343047e+11 -7.925969e+14 -2.014421e+09
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## [3826,] -3.712879e+06 -2.101260e+06 -6.564589e+10 -4.927344e+06
```

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## [3836,] -2.265169e+11 -2.188613e+11 -7.930537e+14 -2.605739e+09
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## [3838,] -3.397818e+06 -4.180728e+06 -6.572156e+10 -4.795955e+06
## [3839,] -9.261922e+04 -2.360448e+05 -2.813117e+10 -5.534913e+06
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## [3847,] -3.276264e+11 -2.600417e+11 -1.048738e+15 -2.907023e+09
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## [3851,] -2.725191e+05 -1.707723e+03 -2.819601e+10 -5.496272e+06
## [3852,] -1.013018e+08 -9.443669e+07 -1.754348e+11 -1.148411e+07
## [3853,] -3.201979e+11 -2.793973e+11 -1.050550e+15 -2.575130e+09
## [3854,] -2.470326e+11 -2.039409e+11 -7.957970e+14 -1.934651e+09
## [3855,] -4.464475e+09 -3.753956e+09 -1.327052e+13 -7.527047e+07
## [3856,] -3.635194e+06 -2.538869e+06 -6.591093e+10 -4.964404e+06
## [3857,] -1.363032e+05 -8.025508e+03 -2.821223e+10 -5.643441e+06
## [3858,] -1.001010e+08 -8.758830e+07 -1.754348e+11 -1.119399e+07
## [3859,] -3.286916e+11 -2.696314e+11 -1.050550e+15 -2.584598e+09
## [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
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## [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
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## [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
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## [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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## [3934,] -3.774384e+06 -2.258276e+06 -6.670927e+10 -5.137091e+06
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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
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## [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
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## [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
## [3965,] -1.380579e+05 -9.777723e+04 -2.868466e+10 -5.671846e+06
## [3966,] -1.007850e+08 -9.958727e+07 -1.783725e+11 -1.162663e+07
## [3967,] -3.212284e+11 -2.600167e+11 -1.068142e+15 -3.395713e+09
## [3968,] -2.358505e+11 -2.421957e+11 -8.095847e+14 -2.813969e+09
## [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
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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
## [3993,] -4.496386e+09 -3.630295e+09 -1.356209e+13 -7.559306e+07
## [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
## [4003,] -3.117813e+11 -2.600081e+11 -1.074853e+15 -2.706077e+09
## [4004,] -2.413904e+11 -2.113051e+11 -8.142070e+14 -1.924839e+09
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## [4006,] -3.269467e+06 -2.440011e+06 -6.747406e+10 -4.934565e+06
## [4007,] -9.512890e+04 -1.596103e+03 -2.888130e+10 -5.671125e+06
## [4008,] -1.007289e+08 -9.043735e+07 -1.795953e+11 -1.177943e+07
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## [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
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## [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
## [4024,] -2.340683e+06 -4.029013e+06 -6.758915e+10 -4.862182e+06
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## [4028,] -2.303558e+11 -2.188241e+11 -8.169866e+14 -2.829907e+09
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## [4035,] -4.330732e+09 -3.888069e+09 -1.365482e+13 -9.043077e+07
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## [4039,] -3.297172e+11 -3.307884e+11 -1.080973e+15 -3.201196e+09
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## [4041,] -4.441637e+09 -4.568081e+09 -1.365482e+13 -9.856847e+07
## [4042,] -3.746289e+06 -2.192165e+06 -6.781964e+10 -4.918744e+06
## [4043,] -1.334632e+05 -6.130132e+04 -2.902922e+10 -5.757950e+06
## [4044,] -9.895322e+07 -8.830490e+07 -1.805151e+11 -1.214151e+07
## [4045,] -3.307884e+11 -2.793569e+11 -1.080973e+15 -3.393844e+09
## [4046,] -2.397906e+11 -2.188206e+11 -8.193066e+14 -2.343251e+09
## [4047,] -4.682071e+09 -3.506443e+09 -1.366256e+13 -7.413490e+07
## [4048,] -4.850974e+06 -2.651125e+06 -6.789655e+10 -4.955364e+06
## [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
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## [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
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## [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
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## [4112,] -2.734614e+11 -2.188141e+11 -8.234909e+14 -2.165466e+09
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## [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
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## [4124,] -2.502211e+11 -2.038981e+11 -8.244222e+14 -1.923364e+09
## [4125,] -4.944624e+09 -4.154683e+09 -1.374787e+13 -8.434134e+07
## [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
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## [4129,] -3.222562e+11 -2.892851e+11 -1.088954e+15 -4.427777e+09
## [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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## [4137,] -4.429324e+09 -4.429324e+09 -1.377896e+13 -8.633150e+07
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## [4147,] -3.329210e+11 -2.892818e+11 -1.091415e+15 -3.414078e+09
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## [4156,] -3.573683e+06 -1.892875e+06 -6.859075e+10 -5.215840e+06
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## [4159,] -3.339939e+11 -2.793399e+11 -1.093880e+15 -2.626632e+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
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## [4169,] -1.034876e+05 -1.044894e+03 -2.944209e+10 -5.738992e+06
## [4170,] -1.017333e+08 -9.322869e+07 -1.830825e+11 -1.219966e+07
## [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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## [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
## [4185,] -4.542816e+09 -3.761357e+09 -1.388023e+13 -8.496558e+07
## [4186,] -3.519689e+06 -2.127036e+06 -6.893917e+10 -5.111518e+06
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## [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
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## [4191,] -4.279103e+09 -4.156752e+09 -1.391146e+13 -7.528132e+07
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## [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
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## [4209,] -4.320683e+09 -4.293208e+09 -1.394273e+13 -7.753039e+07
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## [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
## [4217,] -4.710069e+04 -4.710069e+04 -2.969121e+10 -5.803491e+06
## [4218,] -1.022064e+08 -8.663831e+07 -1.846317e+11 -1.167526e+07
## [4219,] -3.382989e+11 -2.993740e+11 -1.106243e+15 -2.929471e+09
## [4220,] -2.534554e+11 -2.187920e+11 -8.379850e+14 -2.224048e+09
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## [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
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## [4230,] -9.867005e+07 -1.005811e+08 -1.850459e+11 -1.264785e+07
## [4231,] -2.922741e+11 -3.096564e+11 -1.108724e+15 -3.165764e+09
## [4232,] -2.510080e+11 -2.187891e+11 -8.398644e+14 -2.681213e+09
```

```
## [4233,] -4.787523e+09 -3.892358e+09 -1.400538e+13 -9.188682e+07
## [4234,] -3.929992e+06 -3.583165e+06 -6.959971e+10 -5.184001e+06
## [4235,] -1.630235e+05 -4.513176e+04 -2.979115e+10 -5.920713e+06
## [4236,] -1.040006e+08 -8.896676e+07 -1.852531e+11 -1.206137e+07
## [4237,] -3.222276e+11 -2.892579e+11 -1.109345e+15 -3.677785e+09
## [4238,] -2.272146e+11 -2.501943e+11 -8.408049e+14 -2.475160e+09
## [4239,] -5.022285e+09 -4.158132e+09 -1.402106e+13 -8.696737e+07
## [4240,] -3.806638e+06 -2.084898e+06 -6.967762e+10 -5.173985e+06
## [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
## [4247,] -1.140383e+05 -4.416305e+04 -2.984119e+10 -5.955795e+06
## [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
## [4250,] -2.429420e+11 -2.187855e+11 -8.422166e+14 -2.080428e+09
## [4251,] -4.212597e+09 -4.573248e+09 -1.404461e+13 -8.162874e+07
## [4252,] -3.322405e+06 -2.533028e+06 -6.975559e+10 -5.297017e+06
## [4253,] -1.097343e+05 -1.221406e+04 -2.987457e+10 -5.924983e+06
## [4254,] -1.048123e+08 -9.361275e+07 -1.857718e+11 -1.203805e+07
## [4255,] -2.932777e+11 -3.307436e+11 -1.112451e+15 -3.565156e+09
## [4256,] -2.248977e+11 -2.264390e+11 -8.426875e+14 -2.323885e+09
## [4257,] -4.502947e+09 -4.432987e+09 -1.406031e+13 -7.571551e+07
## [4258,] -3.650828e+06 -2.528166e+06 -6.983359e+10 -5.194696e+06
## [4259,] -1.367098e+05 -2.521866e+04 -2.989126e+10 -5.935873e+06
## [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
## [4263,] -4.531187e+09 -4.158723e+09 -1.406817e+13 -7.885722e+07
## [4264,] -2.996217e+06 -3.022091e+06 -6.987261e+10 -5.174402e+06
## [4265,] -6.312328e+04 -1.227873e+02 -2.990796e+10 -5.920483e+06
## [4266,] -1.033784e+08 -8.906769e+07 -1.859795e+11 -1.183364e+07
## [4267,] -3.525290e+11 -3.096496e+11 -1.113695e+15 -3.217727e+09
## [4268,] -2.518153e+11 -2.038698e+11 -8.436296e+14 -2.050727e+09
## [4269,] -4.601914e+09 -3.267458e+09 -1.406817e+13 -9.040479e+07
## [4270,] -3.393200e+06 -2.071679e+06 -6.991164e+10 -5.273350e+06
## [4271,] -7.835124e+04 -1.171272e+04 -2.992467e+10 -6.027335e+06
## [4272,] -9.320921e+07 -1.031663e+08 -1.861873e+11 -1.179478e+07
## [4273,] -3.372032e+11 -2.695481e+11 -1.114939e+15 -2.749565e+09
## [4274,] -3.066119e+11 -2.187820e+11 -8.445722e+14 -2.246046e+09
## [4275,] -4.433394e+09 -4.159019e+09 -1.409175e+13 -8.399804e+07
## [4276,] -3.066141e+06 -2.518455e+06 -6.998973e+10 -5.063287e+06
## [4277,] -7.213172e+04 -1.645244e+03 -2.995810e+10 -6.005952e+06
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## [4279,] -3.328866e+11 -2.793117e+11 -1.115562e+15 -2.808441e+09
## [4280,] -2.658430e+11 -1.966084e+11 -8.450437e+14 -2.426291e+09
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## [4282,] -4.385285e+06 -2.760729e+06 -6.998973e+10 -5.171259e+06
## [4283,] -4.194362e+04 -9.175616e+04 -2.995810e+10 -5.848303e+06
## [4284,] -1.005250e+08 -1.007651e+08 -1.862913e+11 -1.229007e+07
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## [4286,] -2.357941e+11 -2.187813e+11 -8.450437e+14 -2.474475e+09
## [4287,] -4.602329e+09 -3.511513e+09 -1.409961e+13 -7.541800e+07
## [4288,] -3.664741e+06 -1.658637e+06 -7.002879e+10 -5.369949e+06
## [4289,] -5.002349e+04 -6.405587e+04 -2.997482e+10 -5.882895e+06
## [4290,] -1.063979e+08 -9.141373e+07 -1.864992e+11 -1.214182e+07
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## [4291,] -3.264625e+11 -2.599544e+11 -1.117430e+15 -3.070892e+09
## [4292,] -2.493744e+11 -2.342189e+11 -8.464589e+14 -1.877797e+09
## [4293,] -4.159413e+09 -3.893789e+09 -1.412322e+13 -9.412662e+07
## [4294,] -3.240681e+06 -2.278071e+06 -7.014604e+10 -5.171593e+06
## [4295,] -8.412615e+04 -1.902164e+03 -3.002500e+10 -5.996892e+06
## [4296,] -1.030164e+08 -9.376067e+07 -1.868114e+11 -1.250235e+07
## [4297,] -3.222146e+11 -2.695434e+11 -1.118676e+15 -2.652221e+09
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## [4299,] -4.574488e+09 -3.893979e+09 -1.413897e+13 -7.953849e+07
## [4300,] -3.509031e+06 -1.648810e+06 -7.022427e+10 -5.346205e+06
## [4301,] -1.241084e+05 -2.285034e+04 -3.005849e+10 -5.875254e+06
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## [4304,] -2.493705e+11 -2.264296e+11 -8.488204e+14 -2.370080e+09
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## [4307,] -6.848505e+04 -7.874340e+00 -3.010874e+10 -6.003593e+06
## [4308,] -1.279952e+08 -9.151604e+07 -1.872281e+11 -1.194639e+07
## [4309,] -3.034473e+11 -3.307313e+11 -1.121171e+15 -3.519507e+09
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## [4312,] -3.494732e+06 -2.732867e+06 -7.042001e+10 -5.230006e+06
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## [4315,] -3.264555e+11 -2.695386e+11 -1.122420e+15 -2.632586e+09
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## [4321,] -3.285882e+11 -2.793020e+11 -1.123044e+15 -2.867041e+09
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## [4327,] -3.899817e+11 -3.307278e+11 -1.123669e+15 -2.917079e+09
## [4328,] -2.897696e+11 -2.666699e+11 -8.511851e+14 -2.214390e+09
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## [4330,] -3.573105e+06 -2.487025e+06 -7.049839e+10 -5.158783e+06
## [4331,] -4.746622e+04 -1.347985e+01 -3.020939e+10 -5.913412e+06
## [4332,] -1.048802e+08 -9.860448e+07 -1.878539e+11 -1.237899e+07
## [4333,] -3.371890e+11 -3.096342e+11 -1.124919e+15 -3.008222e+09
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## [4343,] -6.040410e+04 -5.801687e+04 -3.024297e+10 -5.932790e+06
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## [4347,] -4.407287e+09 -3.765482e+09 -1.422575e+13 -7.746190e+07
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## [4352,] -2.421250e+11 -2.112461e+11 -8.535531e+14 -1.897948e+09
## [4353,] -4.133832e+09 -4.026863e+09 -1.423365e+13 -8.540712e+07
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## [4355,] -2.912558e+04 -1.862435e+03 -3.027657e+10 -5.902038e+06
## [4356,] -1.034770e+08 -9.630226e+07 -1.882717e+11 -1.244268e+07
## [4357,] -3.502991e+11 -2.599419e+11 -1.127421e+15 -2.670349e+09
## [4358,] -2.608330e+11 -2.038546e+11 -8.540271e+14 -2.100935e+09
## [4359,] -4.704264e+09 -4.160990e+09 -1.424946e+13 -9.335002e+07
## [4360,] -3.196812e+06 -2.470183e+06 -7.077304e+10 -5.402722e+06
## [4361,] -8.357355e+03 -3.591770e+04 -3.029338e+10 -5.910521e+06
## [4362,] -9.375090e+07 -1.034925e+08 -1.883762e+11 -1.233013e+07
## [4363,] -3.065262e+11 -3.307216e+11 -1.128047e+15 -3.675005e+09
## [4364,] -2.658273e+11 -2.187670e+11 -8.545013e+14 -2.198646e+09
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## [4371,] -4.352278e+09 -4.161089e+09 -1.425737e+13 -9.539839e+07
## [4372,] -3.746526e+06 -2.705147e+06 -7.085162e+10 -5.430665e+06
## [4373,] -8.185449e+04 -3.289528e+03 -3.032701e+10 -5.875069e+06
## [4374,] -1.059888e+08 -9.872592e+07 -1.886900e+11 -1.180568e+07
## [4375,] -3.339426e+11 -2.695291e+11 -1.129926e+15 -3.551484e+09
## [4376,] -2.649891e+11 -1.894653e+11 -8.559244e+14 -2.384783e+09
## [4377,] -4.604610e+09 -3.638680e+09 -1.427319e+13 -9.501971e+07
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## [4384,] -1.810293e+07 -1.455218e+07 -1.776522e+09 -1.389764e+04
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## [4388,] -2.364550e+11 -2.444097e+11 -2.144941e+13 -1.248656e+09
## [4389,] -4.132097e+09 -3.611388e+09 -3.576853e+11 -2.520651e+07
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## [4401,] -4.145563e+09 -3.486688e+09 -3.576853e+11 -2.499676e+07
## [4402,] -1.704012e+07 -1.343642e+07 -1.776522e+09 -1.219516e+04
## [4403,] -6.484078e+06 -5.340298e+06 -7.604146e+08 -5.035764e+04
## [4404,] -5.984310e+07 -5.441776e+07 -4.728558e+09 -9.110151e+05
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## [4406,] -2.615429e+11 -2.286319e+11 -2.144941e+13 -1.158616e+09
```

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## [4409,] -6.812936e+06 -5.340298e+06 -7.604146e+08 -4.969931e+04
## [4410,] -6.077238e+07 -5.094407e+07 -4.728558e+09 -9.110151e+05
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## [4416,] -9.109284e+07 -1.036014e+08 -1.891087e+11 -1.251969e+07
## [4417,] -3.190292e+11 -2.792899e+11 -1.132433e+15 -2.536584e+09
## [4418,] -2.658218e+11 -2.187620e+11 -8.578239e+14 -2.392413e+09
## [4419,] -4.633479e+09 -4.027736e+09 -1.430487e+13 -9.124071e+07
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## [4422,] -9.856412e+07 -8.726535e+07 -1.892134e+11 -1.249970e+07
## [4423,] -3.360951e+11 -2.993372e+11 -1.133688e+15 -3.027526e+09
## [4424,] -2.477369e+11 -2.038477e+11 -8.587744e+14 -2.026544e+09
## [4425,] -4.952472e+09 -3.766607e+09 -1.432072e+13 -8.192315e+07
## [4426,] -3.697112e+06 -2.220769e+06 -7.112696e+10 -5.112789e+06
## [4427,] -4.674979e+04 -2.114245e+02 -3.046173e+10 -6.140701e+06
## [4428,] -9.576340e+07 -1.036481e+08 -1.894230e+11 -1.250205e+07
## [4429,] -3.200803e+11 -2.695235e+11 -1.134315e+15 -3.517603e+09
## [4430,] -2.575200e+11 -1.894600e+11 -8.597254e+14 -2.213095e+09
## [4431,] -4.835536e+09 -3.391234e+09 -1.433658e+13 -8.366517e+07
## [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
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## [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
## [4473,] -4.549514e+09 -5.161844e+09 -1.439215e+13 -8.921322e+07
## [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
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## [4487,] -4.524871e+04 -1.753548e+05 -3.064744e+10 -6.053808e+06
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## [4513,] -3.818420e+11 -2.892094e+11 -1.146274e+15 -3.036107e+09
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## [4518,] -1.088972e+08 -9.676774e+07 -1.915254e+11 -1.245784e+07
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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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## [4538,] -2.759306e+11 -2.187412e+11 -8.716576e+14 -2.311587e+09
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## [4540,] -3.996439e+06 -3.125513e+06 -7.219400e+10 -5.322880e+06
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## [4545,] -4.259637e+09 -4.579658e+09 -1.453556e+13 -9.226677e+07
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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
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## [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
## [4571,] -6.205279e+04 -1.917674e+04 -3.103758e+10 -6.248047e+06
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## [4576,] -3.734821e+06 -2.139537e+06 -7.255144e+10 -5.420441e+06
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## [4579,] -3.274742e+11 -2.792592e+11 -1.156392e+15 -2.599763e+09
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## [4597,] -3.179384e+11 -2.694902e+11 -1.160833e+15 -2.570786e+09
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## [4602,] -1.216191e+08 -9.018174e+07 -1.940635e+11 -1.243526e+07
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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
## [4618,] -2.833213e+06 -2.563768e+06 -7.310922e+10 -5.400818e+06
## [4619,] -3.714439e+04 -1.740371e+01 -3.131044e+10 -6.228251e+06
## [4620,] -1.000716e+08 -9.959337e+07 -1.947007e+11 -1.247607e+07
## [4621,] -3.338923e+11 -2.694839e+11 -1.165919e+15 -3.002776e+09
## [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
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## [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
## [4670,] -2.649388e+11 -2.420731e+11 -8.865677e+14 -2.201452e+09
## [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
## [4673,] -8.870614e+03 -8.150508e+04 -3.143019e+10 -6.159644e+06
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## [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
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## [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
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## [4694,] -2.616052e+11 -2.341531e+11 -8.889844e+14 -2.270129e+09
## [4695,] -4.345629e+09 -4.168091e+09 -1.482449e+13 -9.259447e+07
## [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
## [4701,] -4.526973e+09 -3.772613e+09 -1.483256e+13 -8.685942e+07
## [4702,] -3.342939e+06 -1.667703e+06 -7.370921e+10 -5.357122e+06
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## [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
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## [4724,] -2.582339e+11 -2.059515e+11 -2.152461e+13 -1.265859e+09
## [4725,] -4.199749e+09 -3.611480e+09 -3.589392e+11 -2.638366e+07
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## [4727,] -6.605671e+06 -6.038408e+06 -7.630804e+08 -4.659066e+04
## [4728,] -6.399771e+07 -5.442904e+07 -4.745135e+09 -9.239409e+05
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## [4730,] -2.325255e+11 -2.444082e+11 -2.159993e+13 -1.513517e+09
## [4731,] -4.213425e+09 -3.486869e+09 -3.601954e+11 -2.628409e+07
## [4732,] -1.727459e+07 -1.397731e+07 -1.788989e+09 -1.373098e+04
## [4733,] -6.753868e+06 -5.333237e+06 -7.657508e+08 -5.104585e+04
## [4734,] -6.210948e+07 -4.927164e+07 -4.761741e+09 -9.070838e+05
## [4735,] -3.387939e+11 -2.528484e+11 -2.851457e+13 -1.563792e+09
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## [4737,] -4.145760e+09 -3.486869e+09 -3.601954e+11 -2.501204e+07
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## [4743,] -4.726719e+09 -3.902663e+09 -1.486485e+13 -8.516889e+07
## [4744,] -3.277541e+06 -2.286382e+06 -7.386962e+10 -5.454567e+06
## [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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## [4748,] -2.550028e+11 -2.263627e+11 -8.928580e+14 -2.277282e+09
## [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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## [4775,] -6.241115e+04 -1.514051e+04 -3.179081e+10 -6.422233e+06
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## [4781,] -3.969611e+04 -1.551889e+04 -3.182526e+10 -6.301259e+06
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## [4786,] -2.187461e+06 -4.094308e+06 -7.443244e+10 -5.455767e+06
## [4787,] -2.557807e+03 -7.872274e+02 -3.185973e+10 -6.164371e+06
## [4788,] -1.098882e+08 -9.770208e+07 -1.981164e+11 -1.252205e+07
## [4789,] -3.806317e+11 -2.598695e+11 -1.186374e+15 -3.030804e+09
## [4790,] -2.271265e+11 -2.263540e+11 -8.986841e+14 -2.522685e+09
## [4791,] -3.982966e+09 -5.020556e+09 -1.498624e+13 -9.208358e+07
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## [4795,] -3.491127e+11 -3.200094e+11 -1.186374e+15 -4.155853e+09
## [4796,] -2.801627e+11 -2.111800e+11 -8.986841e+14 -2.679880e+09
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## [4803,] -4.265324e+09 -4.170163e+09 -1.499435e+13 -1.043319e+08
## [4804,] -3.673875e+06 -1.441847e+06 -7.455332e+10 -5.504910e+06
## [4805,] -9.201558e+04 -3.148750e+04 -3.191148e+10 -6.389710e+06
## [4806,] -1.084358e+08 -9.307234e+07 -1.984381e+11 -1.261467e+07
## [4807,] -2.891552e+11 -2.891552e+11 -1.188300e+15 -3.061414e+09
## [4808,] -2.844695e+11 -2.500988e+11 -9.006304e+14 -2.176608e+09
## [4809,] -4.786469e+09 -3.904477e+09 -1.501870e+13 -9.294775e+07
## [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
```

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## [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
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## [4858,] -3.042423e+06 -2.005348e+06 -7.499739e+10 -5.800186e+06
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## [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
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## [4875,] -4.587211e+09 -3.775993e+09 -1.512442e+13 -9.093043e+07
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## [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
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## [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
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## [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
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## [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
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## [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
```



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## [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
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## [4934,] -2.767111e+11 -2.111562e+11 -9.152944e+14 -2.159365e+09
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## [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
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## [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
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## [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
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## [4961,] -7.381603e+04 -8.202948e+04 -3.251823e+10 -6.543193e+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
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## [4974,] -1.006792e+08 -1.130441e+08 -2.023195e+11 -1.345256e+07
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## [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
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## [4986,] -1.090733e+08 -9.136114e+07 -2.027531e+11 -1.337853e+07
```

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## [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
## [5000,] -2.525065e+11 -2.263205e+11 -9.211932e+14 -2.422390e+09
## [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
## [5024,] -2.516888e+11 -2.037560e+11 -9.231636e+14 -2.226594e+09
## [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
## [5027,] -4.085536e+04 -6.320592e+03 -3.276253e+10 -6.580407e+06
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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
## [5037,] -4.590938e+09 -4.311653e+09 -1.541913e+13 -9.286249e+07
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## [5039,] -6.989196e+04 -1.399725e+04 -3.279750e+10 -6.613458e+06
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## [5044,] -1.777411e+07 -1.397731e+07 -1.788989e+09 -7.501134e+03
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## [5046,] -6.135732e+07 -4.927164e+07 -4.761741e+09 -1.010149e+06
## [5047,] -3.269645e+11 -2.623082e+11 -2.851457e+13 -1.676313e+09
## [5048,] -2.286304e+11 -2.133790e+11 -2.159993e+13 -1.265805e+09
## [5049,] -4.309075e+09 -3.364356e+09 -3.601954e+11 -2.501204e+07
## [5050,] -1.696601e+07 -1.342522e+07 -1.788989e+09 -1.220326e+04
## [5051,] -7.194296e+06 -5.562229e+06 -7.657508e+08 -5.082442e+04
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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
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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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## [5109,] -4.549517e+09 -3.780314e+09 -1.550149e+13 -7.904239e+07
## [5110,] -2.913206e+06 -1.700626e+06 -7.699153e+10 -5.970999e+06
## [5111,] -1.443448e+04 -3.035890e+04 -3.295512e+10 -6.704653e+06
## [5112,] -1.041993e+08 -9.165352e+07 -2.049279e+11 -1.266839e+07
## [5113,] -3.252484e+11 -2.694085e+11 -1.227163e+15 -2.562811e+09
## [5114,] -2.380329e+11 -2.037470e+11 -9.295822e+14 -1.965837e+09
## [5115,] -4.354096e+09 -3.283114e+09 -1.550974e+13 -7.998932e+07
## [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
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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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## [5129,] -6.848577e+03 -6.272104e+03 -3.302529e+10 -6.596436e+06
## [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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## [5159,] -5.171783e+00 -1.265706e+04 -3.313069e+10 -6.559559e+06
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## [5168,] -2.615309e+11 -2.037387e+11 -9.355267e+14 -2.232450e+09
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## [5183,] -2.488007e+04 -3.448420e+04 -3.321865e+10 -6.697959e+06
## [5184,] -1.044334e+08 -1.012781e+08 -2.065667e+11 -1.312023e+07
## [5185,] -3.381167e+11 -2.992026e+11 -1.236976e+15 -2.952916e+09
## [5186,] -2.648577e+11 -2.419956e+11 -9.370158e+14 -2.163781e+09
## [5187,] -4.466728e+09 -3.781724e+09 -1.562546e+13 -8.435750e+07
## [5188,] -3.212351e+06 -2.078724e+06 -7.760722e+10 -5.888798e+06
## [5189,] -1.886484e+04 -1.888163e+04 -3.323626e+10 -6.701915e+06
## [5190,] -1.101504e+08 -8.960794e+07 -2.066762e+11 -1.309977e+07
## [5191,] -3.178359e+11 -2.693958e+11 -1.237632e+15 -3.448081e+09
## [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
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## [5209,] -3.359472e+11 -2.693918e+11 -1.240912e+15 -3.200498e+09
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## [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
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## [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
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## [5224,] -2.901532e+06 -1.291818e+06 -7.797780e+10 -5.763584e+06
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## [5226,] -1.053252e+08 -9.201967e+07 -2.076628e+11 -1.276196e+07
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## [5228,] -2.309434e+11 -2.419874e+11 -9.424860e+14 -2.308734e+09
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## [5235,] -4.651806e+09 -4.179050e+09 -1.573329e+13 -8.608683e+07
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## [5239,] -3.668725e+11 -2.890829e+11 -1.245513e+15 -3.147389e+09
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## [5243,] -1.162030e+04 -9.661687e+03 -3.346556e+10 -6.840417e+06
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## [5279,] -3.150106e+02 -1.707723e+03 -3.364249e+10 -6.793221e+06
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## [5373,] -4.240743e+09 -3.738559e+09 -3.614537e+11 -2.460262e+07
## [5374,] -1.702120e+07 -1.629075e+07 -1.795238e+09 -1.373527e+04
## [5375,] -6.955364e+06 -5.792356e+06 -7.684259e+08 -5.250979e+04
## [5376,] -6.118195e+07 -5.445159e+07 -4.778375e+09 -9.477343e+05
## [5377,] -3.519376e+11 -2.528477e+11 -2.861418e+13 -1.706916e+09
## [5378,] -2.468195e+11 -2.444074e+11 -2.167539e+13 -1.294774e+09
## [5379,] -4.240743e+09 -3.611663e+09 -3.614537e+11 -2.661491e+07
## [5380,] -1.641138e+07 -1.569427e+07 -1.795238e+09 -9.860944e+03
## [5381,] -6.079186e+06 -6.522428e+06 -7.684259e+08 -4.577163e+04
## [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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## [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
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## [5405,] -2.831244e+04 -1.469263e+04 -3.399774e+10 -6.819209e+06
## [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
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## [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
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## [5424,] -1.084154e+08 -9.962998e+07 -2.119655e+11 -1.354219e+07
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## [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
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## [5437,] -3.104773e+11 -3.094395e+11 -1.272628e+15 -3.410590e+09
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## [5456,] -2.508097e+11 -2.186040e+11 -9.660379e+14 -2.479835e+09
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## [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
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## [5484,] -1.079389e+08 -9.055075e+07 -2.138548e+11 -1.302631e+07
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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
## [5492,] -2.565216e+11 -2.036898e+11 -9.710864e+14 -2.174053e+09
## [5493,] -4.515778e+09 -3.788117e+09 -1.619361e+13 -8.168063e+07
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## [5501,] -1.086862e+04 -5.720988e+04 -3.446236e+10 -6.902729e+06
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## [5515,] -3.478752e+11 -2.890328e+11 -1.285961e+15 -2.886375e+09
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## [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
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## [5526,] -1.093774e+08 -9.534182e+07 -2.151934e+11 -1.367036e+07
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## [5549,] -9.041227e+03 -2.720942e+03 -3.467786e+10 -6.917408e+06
## [5550,] -1.114535e+08 -9.307823e+07 -2.156406e+11 -1.378168e+07
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## [5560,] -2.960663e+06 -1.164827e+06 -8.110036e+10 -6.108220e+06
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## [5564,] -2.285571e+11 -2.499781e+11 -9.791914e+14 -2.469788e+09
## [5565,] -4.377824e+09 -4.051728e+09 -1.632876e+13 -9.447470e+07
## [5566,] -2.196331e+06 -3.330879e+06 -8.110036e+10 -6.119285e+06
```

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## [5567,] -3.459212e+04 -1.915500e+03 -3.473184e+10 -7.054000e+06
## [5568,] -1.055349e+08 -9.313722e+07 -2.160882e+11 -1.343344e+07
## [5569,] -3.063096e+11 -3.412994e+11 -1.293994e+15 -3.246471e+09
## [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
## [5572,] -2.851145e+06 -2.102146e+06 -8.122653e+10 -6.053319e+06
## [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
## [5589,] -4.227393e+09 -4.461932e+09 -1.637959e+13 -9.233795e+07
## [5590,] -3.233202e+06 -2.095504e+06 -8.135281e+10 -5.803013e+06
## [5591,] -1.911754e+04 -3.575783e+03 -3.485796e+10 -6.810926e+06
## [5592,] -1.098680e+08 -9.791973e+07 -2.168727e+11 -1.360477e+07
## [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
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## [5598,] -1.096493e+08 -9.794998e+07 -2.170971e+11 -1.388227e+07
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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
## [5604,] -1.084316e+08 -9.562556e+07 -2.173216e+11 -1.366269e+07
## [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
## [5612,] -2.483478e+11 -2.036691e+11 -9.863109e+14 -2.202264e+09
## [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
## [5618,] -2.427191e+11 -2.185740e+11 -9.873301e+14 -2.476640e+09
## [5619,] -4.775908e+09 -4.187650e+09 -1.646448e+13 -9.008494e+07
## [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
## [5623,] -3.391107e+11 -2.991174e+11 -1.304743e+15 -2.904132e+09
## [5624,] -2.774476e+11 -2.262231e+11 -9.883498e+14 -2.317650e+09
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## [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
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## [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
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## [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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## [5652,] -1.058491e+08 -9.113340e+07 -2.183333e+11 -1.344021e+07
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## [5659,] -3.032049e+11 -3.304782e+11 -1.308112e+15 -3.373305e+09
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## [5665,] -3.011556e+11 -3.304782e+11 -1.308112e+15 -3.005032e+09
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## [5677,] -3.326221e+11 -2.790694e+11 -1.310135e+15 -3.097443e+09
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## [5682,] -1.096707e+08 -1.054513e+08 -2.190091e+11 -1.384534e+07
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## [5686,] -2.177166e+06 -2.737417e+06 -8.228182e+10 -6.158787e+06
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## [5692,] -3.220903e+06 -1.835121e+06 -8.236654e+10 -6.248131e+06
## [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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## [5697,] -4.492502e+09 -4.054745e+09 -1.659223e+13 -9.050168e+07
## [5698,] -3.164867e+06 -2.488954e+06 -8.240892e+10 -6.251951e+06
## [5699,] -3.253187e+04 -1.414224e+04 -3.527395e+10 -7.027260e+06
## [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
## [5703,] -4.322928e+09 -3.867646e+09 -3.614537e+11 -2.418905e+07
## [5704,] -1.764215e+07 -1.569427e+07 -1.795238e+09 -1.391061e+04
## [5705,] -6.522428e+06 -6.522428e+06 -7.684259e+08 -5.161436e+04
## [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
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## [5714,] -2.255366e+11 -2.444066e+11 -2.175098e+13 -1.169478e+09
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## [5716,] -1.795032e+07 -1.568822e+07 -1.801499e+09 -1.969311e+04
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## [5719,] -3.344662e+11 -2.917282e+11 -2.871397e+13 -1.377901e+09
## [5720,] -2.607108e+11 -2.133776e+11 -2.175098e+13 -1.024478e+09
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## [5722,] -1.744831e+07 -1.568822e+07 -1.801499e+09 -2.011392e+04
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## [5728,] -1.707648e+07 -1.568822e+07 -1.801499e+09 -1.845738e+04
## [5729,] -6.196939e+06 -5.788678e+06 -7.711057e+08 -5.606572e+04
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## [5731,] -3.177368e+11 -2.889983e+11 -1.314186e+15 -2.983879e+09
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## [5733,] -4.464587e+09 -3.922642e+09 -1.660076e+13 -8.560581e+07
## [5734,] -3.323297e+06 -2.256899e+06 -8.245130e+10 -6.368195e+06
## [5735,] -1.745254e+04 -6.223803e+03 -3.531024e+10 -7.145092e+06
## [5736,] -1.115129e+08 -1.030856e+08 -2.195730e+11 -1.372266e+07
## [5737,] -3.690375e+11 -2.790638e+11 -1.314861e+15 -3.265040e+09
## [5738,] -2.523913e+11 -2.185611e+11 -9.965264e+14 -2.403161e+09
## [5739,] -5.041803e+09 -3.922834e+09 -1.661784e+13 -9.154397e+07
## [5740,] -1.707888e+06 -2.481726e+06 -8.253611e+10 -6.133447e+06
```

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## [5752,] -2.593217e+06 -2.474508e+06 -8.266339e+10 -6.271164e+06
## [5753,] -9.609116e+02 -2.674796e+02 -3.538288e+10 -7.158816e+06
## [5754,] -1.053469e+08 -9.834363e+07 -2.200247e+11 -1.389657e+07
## [5755,] -3.456368e+11 -2.503012e+11 -1.318243e+15 -2.993568e+09
## [5756,] -2.411067e+11 -2.036525e+11 -9.985758e+14 -1.935096e+09
## [5757,] -4.326417e+09 -4.326417e+09 -1.665201e+13 -1.048733e+08
## [5758,] -2.379186e+06 -2.025308e+06 -8.270585e+10 -6.174514e+06
## [5759,] -1.272592e+04 -1.187461e+03 -3.541922e+10 -7.109326e+06
## [5760,] -9.908736e+07 -9.837394e+07 -2.202507e+11 -1.415900e+07
## [5761,] -3.093809e+11 -2.990998e+11 -1.318920e+15 -3.285851e+09
## [5762,] -2.639269e+11 -2.339897e+11 -9.990885e+14 -2.371082e+09
## [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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## [5799,] -4.925097e+09 -3.924174e+09 -1.673761e+13 -9.074901e+07
## [5800,] -1.776062e+06 -2.445743e+06 -8.317353e+10 -6.487005e+06
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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
## [5805,] -4.536750e+09 -3.924461e+09 -1.676333e+13 -8.090522e+07
## [5806,] -3.137088e+06 -1.997132e+06 -8.325871e+10 -6.287402e+06
## [5807,] -2.762752e+04 -2.981785e+03 -3.563769e+10 -7.087608e+06
## [5808,] -1.009615e+08 -9.857110e+07 -2.217226e+11 -1.395532e+07
## [5809,] -3.177196e+11 -2.889818e+11 -1.327734e+15 -3.064199e+09
## [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
## [5812,] -2.553990e+06 -2.208942e+06 -8.334392e+10 -6.385207e+06
## [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
## [5820,] -1.098683e+08 -9.626927e+07 -2.221765e+11 -1.474908e+07
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## [5832,] -1.042211e+08 -1.034894e+08 -2.225172e+11 -1.401323e+07
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## [5837,] -2.770547e+03 -6.084812e+04 -3.580198e+10 -7.108569e+06
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## [5839,] -3.369051e+11 -3.093622e+11 -1.333853e+15 -2.890561e+09
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## [5844,] -1.104670e+08 -1.011152e+08 -2.228582e+11 -1.414718e+07
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## [5847,] -4.737445e+09 -4.897257e+09 -1.685780e+13 -9.135265e+07
## [5848,] -2.977306e+06 -1.394890e+06 -8.372795e+10 -6.348403e+06
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## [5851,] -3.456152e+11 -3.198158e+11 -1.334534e+15 -3.135996e+09
## [5852,] -2.647429e+11 -2.185411e+11 -1.010916e+15 -2.330050e+09
## [5853,] -4.071107e+09 -4.897257e+09 -1.685780e+13 -9.869724e+07
## [5854,] -3.081145e+06 -3.160192e+06 -8.372795e+10 -6.367208e+06
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## [5862,] -1.040393e+08 -1.109867e+08 -2.229719e+11 -1.393766e+07
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## [5866,] -2.524765e+06 -1.570866e+06 -8.385615e+10 -6.534173e+06
## [5867,] -8.639032e+03 -1.067832e+04 -3.589342e+10 -7.207764e+06
## [5868,] -1.075166e+08 -9.406873e+07 -2.231994e+11 -1.379754e+07
## [5869,] -3.489078e+11 -2.889711e+11 -1.336577e+15 -3.156650e+09
## [5870,] -2.036332e+11 -2.339698e+11 -1.012981e+15 -2.497100e+09
## [5871,] -4.853835e+09 -3.925897e+09 -1.689223e+13 -8.804042e+07
## [5872,] -2.268485e+06 -1.964867e+06 -8.389891e+10 -6.427943e+06
## [5873,] -7.989962e+03 -4.088626e+04 -3.591172e+10 -7.262017e+06
## [5874,] -1.075325e+08 -1.011766e+08 -2.233132e+11 -1.397267e+07
## [5875,] -3.434235e+11 -2.950136e+11 -1.337259e+15 -3.156564e+09
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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
## [5888,] -2.639018e+11 -2.339661e+11 -1.015564e+15 -2.298171e+09
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## [5891,] -2.897451e+04 -1.258264e+05 -3.603996e+10 -7.317391e+06
## [5892,] -9.960527e+07 -1.037072e+08 -2.241107e+11 -1.413839e+07
## [5893,] -2.869641e+11 -2.889646e+11 -1.342034e+15 -3.229690e+09
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## [5896,] -2.411828e+06 -1.555580e+06 -8.419851e+10 -6.319387e+06
## [5897,] -1.329473e+02 -1.197880e+04 -3.603996e+10 -7.264406e+06
## [5898,] -1.091384e+08 -9.418735e+07 -2.241107e+11 -1.403061e+07
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## [5900,] -2.539940e+11 -2.036284e+11 -1.016598e+15 -2.720228e+09
## [5901,] -4.898541e+09 -4.193388e+09 -1.696117e+13 -9.172839e+07
## [5902,] -2.719846e+06 -1.947767e+06 -8.424135e+10 -6.474150e+06
## [5903,] -1.203853e+01 -4.339566e+04 -3.605830e+10 -7.199913e+06
## [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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## [5907,] -4.441035e+09 -5.046253e+09 -1.696980e+13 -8.895750e+07
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## [5909,] -8.922609e+02 -6.742537e+04 -3.611334e+10 -7.365857e+06
## [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
## [5918,] -2.410759e+11 -1.963693e+11 -1.019704e+15 -1.960972e+09
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## [5926,] -2.624220e+06 -1.727035e+06 -8.462744e+10 -6.490181e+06
## [5927,] -2.418926e+02 -1.370950e+04 -3.622356e+10 -7.310960e+06
## [5928,] -1.090481e+08 -8.749106e+07 -2.252524e+11 -1.413287e+07
## [5929,] -3.325719e+11 -2.692641e+11 -1.348871e+15 -3.040985e+09
## [5930,] -2.418694e+11 -2.261751e+11 -1.022295e+15 -2.635409e+09
## [5931,] -4.248781e+09 -4.469898e+09 -1.704756e+13 -1.092829e+08
## [5932,] -2.573664e+06 -1.355463e+06 -8.467039e+10 -6.339165e+06
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## [5945,] -2.564758e+04 -5.164455e+03 -3.631553e+10 -7.294490e+06
## [5946,] -1.129265e+08 -1.015305e+08 -2.259388e+11 -1.414935e+07
## [5947,] -3.208474e+11 -2.790185e+11 -1.352981e+15 -2.586064e+09
## [5948,] -2.458706e+11 -1.970814e+11 -1.025410e+15 -1.953051e+09
## [5949,] -4.640042e+09 -3.798094e+09 -1.709949e+13 -9.317112e+07
## [5950,] -2.582891e+06 -1.344808e+06 -8.492833e+10 -6.655271e+06
## [5951,] -1.170280e+04 -2.940792e+04 -3.635235e+10 -7.395842e+06
## [5952,] -1.066737e+08 -1.089099e+08 -2.260533e+11 -1.429049e+07
## [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
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## [5966,] -2.482884e+11 -2.110017e+11 -1.026449e+15 -2.227193e+09
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## [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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## [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
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## [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
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## [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
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## [5992,] -3.254121e+06 -1.011864e+06 -8.518667e+10 -6.609741e+06
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## [6028,] -2.263976e+06 -2.784650e+06 -8.566131e+10 -6.511441e+06
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## [6042,] -5.916359e+07 -5.272207e+07 -4.811732e+09 -9.437245e+05
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## [6075,] -4.542825e+09 -3.799978e+09 -1.727318e+13 -9.065462e+07
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## [6077,] -2.378829e+03 -1.896572e+04 -3.672160e+10 -7.460429e+06
## [6078,] -1.097300e+08 -9.013531e+07 -2.283494e+11 -1.357385e+07
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## [6083,] -1.449328e+04 -5.669929e+04 -3.677714e+10 -7.350087e+06
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## [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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## [6123,] -4.488203e+09 -4.615304e+09 -1.741276e+13 -9.676704e+07
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## [6135,] -4.686892e+09 -4.335469e+09 -1.743024e+13 -9.071724e+07
## [6136,] -2.149832e+06 -1.834293e+06 -8.657109e+10 -6.651171e+06
## [6137,] -2.170546e+04 -1.942313e+03 -3.707411e+10 -7.347220e+06
## [6138,] -1.105370e+08 -1.021474e+08 -2.305414e+11 -1.479154e+07
## [6139,] -3.325314e+11 -2.990246e+11 -1.380543e+15 -3.494886e+09
## [6140,] -2.506911e+11 -2.035898e+11 -1.045769e+15 -2.427919e+09
## [6141,] -4.730193e+09 -3.801863e+09 -1.744774e+13 -9.074636e+07
## [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
```

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## [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
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## [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
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## [6240,] -1.010082e+08 -1.000484e+08 -2.328601e+11 -1.492781e+07
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## [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
## [6246,] -1.068793e+08 -1.000637e+08 -2.329764e+11 -1.447486e+07
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## [6249,] -4.689194e+09 -4.617796e+09 -1.762318e+13 -8.806649e+07
## [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
## [6252,] -1.091496e+08 -1.025030e+08 -2.332090e+11 -1.477945e+07
## [6253,] -3.477292e+11 -3.303649e+11 -1.396517e+15 -3.470811e+09
## [6254,] -2.245854e+11 -2.339062e+11 -1.057869e+15 -2.458257e+09
## [6255,] -4.689403e+09 -4.066528e+09 -1.764077e+13 -9.166719e+07
## [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
## [6259,] -3.314362e+11 -2.789669e+11 -1.397214e+15 -2.994151e+09
## [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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## [6264,] -1.119335e+08 -1.001095e+08 -2.333253e+11 -1.519301e+07
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## [6266,] -2.450184e+11 -1.891960e+11 -1.058924e+15 -2.192234e+09
## [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
## [6293,] -3.302614e+02 -9.675380e+02 -3.770912e+10 -7.694189e+06
## [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
## [6297,] -4.256754e+09 -4.339092e+09 -1.774651e+13 -9.858225e+07
## [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
## [6306,] -1.151729e+08 -9.554189e+07 -2.346068e+11 -1.546498e+07
## [6307,] -3.389808e+11 -3.197276e+11 -1.404888e+15 -3.169107e+09
## [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
## [6312,] -1.152222e+08 -1.003237e+08 -2.349569e+11 -1.492313e+07
## [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
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## [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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## [6323,] -2.701861e+03 -3.369420e+04 -3.784052e+10 -7.672170e+06
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## [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
## [6332,] -2.498466e+11 -2.109455e+11 -1.068448e+15 -2.093339e+09
## [6333,] -4.605968e+09 -4.478996e+09 -1.782602e+13 -8.977970e+07
## [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
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## [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
## [6354,] -1.095331e+08 -9.572123e+07 -2.360088e+11 -1.463559e+07
## [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
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## [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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## [6390,] -5.842953e+07 -5.447415e+07 -4.811732e+09 -9.812904e+05
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## [6392,] -2.292024e+11 -2.261061e+11 -1.072163e+15 -2.048556e+09
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## [6395,] -8.443372e+01 -8.325961e+04 -3.800981e+10 -7.748504e+06
## [6396,] -1.126081e+08 -1.029212e+08 -2.363600e+11 -1.470815e+07
## [6397,] -3.000029e+11 -3.092619e+11 -1.415386e+15 -3.402827e+09
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## [6401,] -8.667456e+03 -5.772276e+04 -3.802864e+10 -7.649294e+06
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## [6403,] -3.218252e+11 -2.789451e+11 -1.416088e+15 -3.252215e+09
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## [6408,] -1.081149e+08 -1.078662e+08 -2.365943e+11 -1.491334e+07
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## [6411,] -4.578426e+09 -4.621016e+09 -1.789685e+13 -9.169069e+07
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## [6413,] -1.470746e+04 -2.372343e+05 -3.806632e+10 -7.873746e+06
## [6414,] -1.131817e+08 -1.078979e+08 -2.368286e+11 -1.463074e+07
## [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
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## [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
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## [6433,] -3.357134e+11 -2.789402e+11 -1.420299e+15 -3.230469e+09
## [6434,] -2.705198e+11 -2.035504e+11 -1.075884e+15 -2.305306e+09
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## [6441,] -4.664535e+09 -4.204678e+09 -1.795894e+13 -9.894676e+07
## [6442,] -2.190536e+06 -1.176733e+06 -8.919696e+10 -7.007714e+06
## [6443,] -1.061717e+03 -1.191941e+05 -3.819835e+10 -7.739156e+06
## [6444,] -1.112506e+08 -1.006608e+08 -2.375324e+11 -1.468417e+07
## [6445,] -3.271262e+11 -2.691801e+11 -1.422407e+15 -2.568842e+09
## [6446,] -2.276443e+11 -2.747529e+11 -1.077481e+15 -2.344196e+09
## [6447,] -4.110298e+09 -4.621848e+09 -1.796782e+13 -9.709669e+07
## [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
## [6450,] -1.112828e+08 -1.055518e+08 -2.377673e+11 -1.460428e+07
## [6451,] -3.281914e+11 -2.789362e+11 -1.423813e+15 -2.950336e+09
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## [6453,] -4.523076e+09 -3.781917e+09 -1.799446e+13 -1.030046e+08
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## [6456,] -1.093042e+08 -9.597559e+07 -2.380022e+11 -1.479032e+07
## [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
## [6459,] -4.693800e+09 -4.070623e+09 -1.801224e+13 -9.532375e+07
## [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
## [6462,] -1.083375e+08 -9.836485e+07 -2.382373e+11 -1.431809e+07
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## [6464,] -2.425843e+11 -2.035442e+11 -1.080678e+15 -2.062157e+09
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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
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## [6472,] -2.085428e+06 -1.507541e+06 -8.955004e+10 -6.914040e+06
## [6473,] -1.345890e+03 -1.229161e+05 -3.833061e+10 -7.738893e+06
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## [6481,] -3.454921e+11 -3.196974e+11 -1.429445e+15 -3.261195e+09
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## [6483,] -4.651500e+09 -4.342717e+09 -1.806562e+13 -1.037674e+08
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## [6488,] -2.425798e+11 -2.260901e+11 -1.083880e+15 -2.319807e+09
## [6489,] -4.781088e+09 -4.071403e+09 -1.808344e+13 -9.626292e+07
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```

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## [6514,] -2.128196e+06 -1.312396e+06 -8.999237e+10 -6.954284e+06
## [6515,] -7.821520e+03 -4.454927e+04 -3.851994e+10 -7.850040e+06
## [6516,] -1.117939e+08 -1.009370e+08 -2.396501e+11 -1.516022e+07
## [6517,] -3.443902e+11 -2.691658e+11 -1.435088e+15 -3.335428e+09
## [6518,] -2.498199e+11 -1.891608e+11 -1.087087e+15 -2.272724e+09
## [6519,] -4.956892e+09 -4.206561e+09 -1.812800e+13 -9.227254e+07
## [6520,] -2.233815e+06 -1.143810e+06 -9.008097e+10 -6.985981e+06
## [6521,] -9.703849e+02 -2.724545e+02 -3.855786e+10 -7.883380e+06
## [6522,] -1.021582e+08 -1.058189e+08 -2.397680e+11 -1.540008e+07
## [6523,] -3.454841e+11 -2.691650e+11 -1.435794e+15 -3.367713e+09
## [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
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## [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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## [6584,] -2.441662e+11 -2.035270e+11 -1.094051e+15 -2.453107e+09
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## [6590,] -2.276217e+11 -2.338559e+11 -1.094051e+15 -2.575117e+09
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## [6597,] -4.841392e+09 -4.073451e+09 -1.827099e+13 -9.130352e+07
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## [6599,] -1.420777e+03 -1.037926e+05 -3.884288e+10 -7.873368e+06
## [6600,] -1.125598e+08 -1.036045e+08 -2.415403e+11 -1.497643e+07
## [6601,] -3.400143e+11 -2.989461e+11 -1.446408e+15 -3.091065e+09
## [6602,] -2.546965e+11 -2.184261e+11 -1.095661e+15 -2.310384e+09
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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
## [6614,] -2.481878e+11 -2.184254e+11 -1.096198e+15 -2.202429e+09
## [6615,] -4.526365e+09 -4.208246e+09 -1.827995e+13 -9.312731e+07
## [6616,] -2.424090e+06 -1.640970e+06 -9.079132e+10 -7.078513e+06
## [6617,] -6.032469e+03 -1.042855e+05 -3.886192e+10 -7.935593e+06
## [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
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## [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
## [6630,] -1.151952e+08 -9.886568e+07 -2.421326e+11 -1.487651e+07
## [6631,] -2.769410e+11 -3.632179e+11 -1.449954e+15 -3.420228e+09
## [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
## [6640,] -2.477394e+06 -1.106526e+06 -9.110297e+10 -7.166776e+06
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## [6642,] -1.111865e+08 -1.013212e+08 -2.426069e+11 -1.532808e+07
## [6643,] -2.989385e+11 -3.196689e+11 -1.452794e+15 -3.607690e+09
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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
## [6650,] -2.322792e+11 -2.184183e+11 -1.101576e+15 -2.270757e+09
## [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
## [6664,] -2.234455e+06 -9.462441e+05 -9.137053e+10 -7.008523e+06
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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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## [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
## [6681,] -4.713292e+09 -3.558398e+09 -1.845051e+13 -1.010432e+08
## [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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## [6687,] -4.528319e+09 -3.942865e+09 -1.845051e+13 -9.605629e+07
## [6688,] -2.130515e+06 -2.001887e+06 -9.168317e+10 -6.977646e+06
## [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
## [6692,] -2.421320e+11 -2.365761e+11 -1.095124e+13 -1.211871e+09
## [6693,] -4.292538e+09 -3.851884e+09 -1.826204e+11 -2.305782e+07
## [6694,] -1.814743e+07 -1.611113e+07 -9.070237e+08 -2.051499e+02
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## [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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## [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
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## [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
## [6708,] -5.350059e+07 -5.796644e+07 -2.449854e+09 -6.398403e+05
## [6709,] -3.389372e+11 -2.624342e+11 -1.474185e+13 -1.338992e+09
## [6710,] -2.526181e+11 -1.951638e+11 -1.116703e+13 -1.112141e+09
## [6711,] -4.238253e+09 -4.116491e+09 -1.862187e+11 -2.308719e+07
## [6712,] -1.767323e+07 -1.668417e+07 -9.293909e+08 -1.465417e+01
## [6713,] -7.484601e+06 -6.399674e+06 -3.978124e+08 -1.265913e+04
## [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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## [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
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## [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
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## [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
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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
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## [6820,] -1.763782e+06 -1.571249e+06 -9.239979e+10 -7.082026e+06
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## [6838,] -1.878352e+06 -1.757698e+06 -9.253447e+10 -7.114111e+06
## [6839,] -9.836683e+03 -6.561234e+04 -3.964650e+10 -8.104706e+06
## [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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## [6895,] -3.270511e+11 -2.788684e+11 -1.483503e+15 -3.014582e+09
## [6896,] -2.489578e+11 -1.962365e+11 -1.123761e+15 -2.236974e+09
## [6897,] -4.503574e+09 -4.774436e+09 -1.874864e+13 -9.248130e+07
## [6898,] -2.256899e+06 -1.540747e+06 -9.311920e+10 -7.115383e+06
## [6899,] -3.281916e+04 -1.315274e+05 -3.985834e+10 -8.250982e+06
## [6900,] -1.108863e+08 -9.722229e+07 -2.478549e+11 -1.480875e+07
```

```
## [6901,] -3.454221e+11 -2.989009e+11 -1.484939e+15 -2.862859e+09
## [6902,] -2.562949e+11 -2.260349e+11 -1.124849e+15 -2.012565e+09
## [6903,] -4.574190e+09 -3.946128e+09 -1.875771e+13 -8.950083e+07
## [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
## [6928,] -2.027483e+06 -1.531277e+06 -9.334459e+10 -7.163699e+06
## [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
## [6938,] -2.385406e+11 -2.260312e+11 -1.127571e+15 -2.329483e+09
## [6939,] -4.406386e+09 -3.687982e+09 -1.880310e+13 -1.189991e+08
## [6940,] -3.172375e+06 -2.132836e+06 -9.338970e+10 -7.267973e+06
## [6941,] -1.491800e+03 -1.348739e+05 -3.997412e+10 -7.875847e+06
## [6942,] -1.102438e+08 -1.045399e+08 -2.486949e+11 -1.554027e+07
## [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
## [6945,] -4.448374e+09 -4.214197e+09 -1.882128e+13 -9.523605e+07
## [6946,] -2.216307e+06 -1.715406e+06 -9.347996e+10 -7.260131e+06
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## [6948,] -1.127872e+08 -9.734288e+07 -2.488151e+11 -1.481896e+07
## [6949,] -3.476094e+11 -2.691040e+11 -1.490690e+15 -2.892199e+09
## [6950,] -2.260283e+11 -2.260283e+11 -1.129751e+15 -2.496513e+09
## [6951,] -4.746604e+09 -3.946992e+09 -1.883946e+13 -9.711357e+07
## [6952,] -2.189632e+06 -1.019873e+06 -9.357025e+10 -7.220193e+06
## [6953,] -1.563331e+04 -1.563331e+04 -4.005140e+10 -8.218817e+06
## [6954,] -1.128197e+08 -1.021536e+08 -2.490554e+11 -1.527643e+07
## [6955,] -3.270414e+11 -2.988934e+11 -1.491410e+15 -3.200663e+09
## [6956,] -2.457221e+11 -2.260283e+11 -1.129751e+15 -2.432086e+09
## [6957,] -5.024681e+09 -4.079696e+09 -1.884855e+13 -1.112217e+08
## [6958,] -1.930656e+06 -1.341620e+06 -9.361542e+10 -7.172276e+06
```

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## [6960,] -1.198378e+08 -1.046337e+08 -2.494161e+11 -1.570895e+07
## [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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## [6965,] -7.777134e+01 -1.056720e+05 -4.014811e+10 -8.204164e+06
## [6966,] -1.154582e+08 -1.022308e+08 -2.496568e+11 -1.539070e+07
## [6967,] -3.367002e+11 -2.788547e+11 -1.495732e+15 -3.524299e+09
## [6968,] -2.538253e+11 -1.962250e+11 -1.133025e+15 -2.228081e+09
## [6969,] -4.936583e+09 -4.214990e+09 -1.889405e+13 -9.131104e+07
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## [6971,] -1.674715e+05 -6.491770e+03 -4.016746e+10 -8.099277e+06
## [6972,] -1.136814e+08 -1.022463e+08 -2.497771e+11 -1.536853e+07
## [6973,] -3.334632e+11 -2.788547e+11 -1.495732e+15 -2.656066e+09
## [6974,] -2.481361e+11 -2.260240e+11 -1.133025e+15 -2.375956e+09
## [6975,] -4.435238e+09 -4.351988e+09 -1.889405e+13 -8.715878e+07
## [6976,] -2.262688e+06 -1.508667e+06 -9.388664e+10 -7.269061e+06
## [6977,] -5.841788e+03 -1.066679e+05 -4.018682e+10 -8.246698e+06
## [6978,] -1.099180e+08 -1.022772e+08 -2.500179e+11 -1.534300e+07
## [6979,] -3.356177e+11 -3.091641e+11 -1.497174e+15 -3.306282e+09
## [6980,] -2.465201e+11 -2.034753e+11 -1.134663e+15 -2.694135e+09
## [6981,] -4.533669e+09 -3.947856e+09 -1.892138e+13 -9.849168e+07
## [6982,] -2.169326e+06 -1.504915e+06 -9.397713e+10 -7.245150e+06
## [6983,] -2.149884e+04 -2.749498e+05 -4.022556e+10 -8.131904e+06
## [6984,] -1.074548e+08 -1.047432e+08 -2.502589e+11 -1.557143e+07
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## [6986,] -2.620615e+11 -2.183740e+11 -1.135210e+15 -2.367757e+09
## [6987,] -4.491688e+09 -4.633075e+09 -1.893961e+13 -9.583945e+07
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## [6989,] -2.051991e+04 -1.086737e+05 -4.026431e+10 -8.264262e+06
## [6990,] -1.104686e+08 -1.047588e+08 -2.503794e+11 -1.533283e+07
## [6991,] -3.280987e+11 -2.690945e+11 -1.499338e+15 -2.961798e+09
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## [6994,] -1.206562e+06 -1.888924e+06 -9.406767e+10 -7.181250e+06
## [6995,] -1.913867e+04 -7.873671e+04 -4.026431e+10 -8.137823e+06
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## [6997,] -3.498000e+11 -2.887806e+11 -1.499338e+15 -3.115917e+09
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## [7001,] -8.873492e+03 -1.434240e+05 -4.026431e+10 -8.174250e+06
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## [7006,] -1.575159e+06 -2.099488e+06 -9.406767e+10 -7.277502e+06
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## [7009,] -3.323816e+11 -2.887789e+11 -1.500782e+15 -2.891049e+09
## [7010,] -2.473233e+11 -2.108564e+11 -1.136850e+15 -1.917589e+09
## [7011,] -4.633284e+09 -3.439642e+09 -1.895784e+13 -9.281964e+07
## [7012,] -1.864303e+06 -9.999081e+05 -9.415825e+10 -7.173454e+06
## [7013,] -8.522901e+04 -3.386271e+04 -4.030308e+10 -8.046041e+06
## [7014,] -1.102653e+08 -1.048058e+08 -2.507411e+11 -1.535079e+07
## [7015,] -3.432139e+11 -2.690921e+11 -1.501504e+15 -2.941295e+09
## [7016,] -2.628895e+11 -2.108557e+11 -1.137397e+15 -2.136569e+09
```

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## [7017,] -4.791449e+09 -4.080965e+09 -1.896697e+13 -9.162817e+07
## [7018,] -2.475758e+06 -1.318706e+06 -9.420355e+10 -7.334243e+06
## [7019,] -7.513842e+03 -8.002843e+04 -4.032248e+10 -8.187363e+06
## [7020,] -1.143230e+08 -9.996280e+07 -2.507411e+11 -1.576615e+07
## [7021,] -3.217212e+11 -2.887781e+11 -1.501504e+15 -3.501478e+09
## [7022,] -2.361561e+11 -2.497489e+11 -1.137397e+15 -2.503555e+09
## [7023,] -5.496666e+09 -3.689652e+09 -1.896697e+13 -1.044725e+08
## [7024,] -1.105433e+06 -2.092850e+06 -9.420355e+10 -7.085931e+06
## [7025,] -8.388110e+03 -1.101904e+05 -4.032248e+10 -8.266160e+06
## [7026,] -1.148353e+08 -1.072702e+08 -2.507411e+11 -1.529458e+07
## [7027,] -3.081235e+11 -2.988817e+11 -1.501504e+15 -3.074182e+09
## [7028,] -2.562771e+11 -1.890990e+11 -1.137397e+15 -2.618489e+09
## [7029,] -4.619254e+09 -3.817993e+09 -1.897609e+13 -8.964985e+07
## [7030,] -1.662261e+06 -1.316952e+06 -9.424887e+10 -7.261811e+06
## [7031,] -2.918298e+04 -3.442747e+04 -4.034187e+10 -8.222656e+06
## [7032,] -1.055735e+08 -1.024009e+08 -2.509823e+11 -1.573079e+07
## [7033,] -3.280943e+11 -2.690905e+11 -1.502949e+15 -2.971534e+09
## [7034,] -2.433034e+11 -2.260167e+11 -1.138492e+15 -2.943290e+09
## [7035,] -4.849903e+09 -4.081258e+09 -1.899434e+13 -9.067269e+07
## [7036,] -2.107822e+06 -9.938046e+05 -9.433954e+10 -7.399317e+06
## [7037,] -2.042808e+04 -2.317579e+05 -4.038068e+10 -8.273702e+06
## [7038,] -1.090602e+08 -1.024164e+08 -2.511030e+11 -1.468231e+07
## [7039,] -3.410298e+11 -2.887748e+11 -1.504394e+15 -3.167556e+09
## [7040,] -2.369421e+11 -2.337938e+11 -1.139586e+15 -2.446753e+09
## [7041,] -4.648064e+09 -3.818277e+09 -1.900348e+13 -9.779844e+07
## [7042,] -1.656355e+06 -2.084016e+06 -9.438489e+10 -7.266128e+06
## [7043,] -3.346457e+04 -1.926148e+04 -4.040009e+10 -8.173979e+06
## [7044,] -1.123498e+08 -1.048683e+08 -2.512237e+11 -1.550641e+07
## [7045,] -3.112320e+11 -3.196066e+11 -1.504394e+15 -3.273332e+09
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## [7048,] -2.149115e+06 -1.488089e+06 -9.438489e+10 -7.310423e+06
## [7049,] -9.102346e+03 -1.882550e+05 -4.041951e+10 -8.276849e+06
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## [7053,] -4.186887e+09 -3.999406e+09 -3.677782e+11 -2.558459e+07
## [7054,] -1.748510e+07 -1.339164e+07 -1.826650e+09 -1.239304e+04
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## [7060,] -1.686695e+07 -1.507924e+07 -1.826650e+09 -1.272730e+04
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## [7066,] -1.856149e+07 -1.394305e+07 -1.826650e+09 -1.375677e+04
## [7067,] -6.704629e+06 -5.312082e+06 -7.818714e+08 -5.112253e+04
## [7068,] -6.293896e+07 -5.450799e+07 -4.861985e+09 -9.412052e+05
## [7069,] -3.269593e+11 -2.917249e+11 -2.911486e+13 -1.683577e+09
## [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
## [7072,] -1.773548e+07 -1.450558e+07 -1.826650e+09 -1.289609e+04
## [7073,] -6.883645e+06 -5.540624e+06 -7.818714e+08 -5.156715e+04
## [7074,] -6.012314e+07 -5.628926e+07 -4.861985e+09 -9.458546e+05
```

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## [7080,] -6.105459e+07 -4.933602e+07 -4.861985e+09 -9.458546e+05
## [7081,] -3.185529e+11 -2.788442e+11 -1.505117e+15 -3.348321e+09
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## [7085,] -7.590848e+03 -3.614976e+04 -4.045836e+10 -8.302599e+06
## [7086,] -1.106293e+08 -1.000698e+08 -2.515860e+11 -1.543972e+07
## [7087,] -3.070838e+11 -2.887724e+11 -1.506564e+15 -2.991473e+09
## [7088,] -2.481247e+11 -2.260131e+11 -1.141230e+15 -2.151097e+09
## [7089,] -4.549011e+09 -4.777710e+09 -1.903088e+13 -9.394921e+07
## [7090,] -1.358097e+06 -1.867978e+06 -9.452100e+10 -7.383495e+06
## [7091,] -2.742470e+04 -8.308332e+04 -4.045836e+10 -8.271530e+06
## [7092,] -1.147099e+08 -1.024937e+08 -2.517068e+11 -1.553993e+07
## [7093,] -3.280890e+11 -2.988750e+11 -1.507287e+15 -3.156730e+09
## [7094,] -2.465103e+11 -2.260124e+11 -1.141778e+15 -2.366865e+09
## [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
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## [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
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## [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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## [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
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## [7139,] -1.109599e+04 -1.969738e+05 -4.067234e+10 -8.288848e+06
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## [7146,] -1.172435e+08 -1.076028e+08 -2.532802e+11 -1.558998e+07
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## [7151,] -2.478856e+04 -1.582582e+05 -4.075030e+10 -8.428497e+06
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## [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
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## [7201,] -3.091327e+11 -3.302077e+11 -1.523976e+15 -3.270972e+09
## [7202,] -2.670398e+11 -2.108332e+11 -1.154971e+15 -2.333627e+09
## [7203,] -4.070723e+09 -4.356021e+09 -1.926003e+13 -9.595328e+07
## [7204,] -1.676161e+06 -1.434516e+06 -9.570478e+10 -7.406370e+06
## [7205,] -1.481141e+04 -2.543552e+05 -4.096505e+10 -8.437426e+06
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## [7207,] -3.442772e+11 -2.690659e+11 -1.525432e+15 -2.898282e+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
## [7220,] -2.546109e+11 -2.259935e+11 -1.156074e+15 -2.476675e+09
## [7221,] -4.882412e+09 -3.692809e+09 -1.927842e+13 -1.054337e+08
## [7222,] -1.772073e+06 -9.471363e+05 -9.575046e+10 -7.504214e+06
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## [7224,] -1.036415e+08 -1.053541e+08 -2.549801e+11 -1.571250e+07
## [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
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## [7237,] -3.323490e+11 -2.988516e+11 -1.527617e+15 -3.324051e+09
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## [7239,] -4.342720e+09 -3.951890e+09 -1.930602e+13 -1.056959e+08
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```



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## [7262,] -2.678717e+11 -2.183418e+11 -1.159938e+15 -2.301724e+09
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## [7276,] -1.697041e+06 -1.418089e+06 -9.611627e+10 -7.407268e+06
## [7277,] -7.129544e+03 -2.613393e+05 -4.114119e+10 -8.403314e+06
## [7278,] -1.074393e+08 -1.006056e+08 -2.558321e+11 -1.589775e+07
## [7279,] -3.377383e+11 -2.887436e+11 -1.531991e+15 -3.112079e+09
## [7280,] -2.603673e+11 -2.183411e+11 -1.160491e+15 -2.325059e+09
## [7281,] -4.709309e+09 -4.219953e+09 -1.935207e+13 -9.816609e+07
## [7282,] -1.795587e+06 -2.001022e+06 -9.611627e+10 -7.460136e+06
## [7283,] -1.653237e+04 -9.921610e+04 -4.114119e+10 -8.400470e+06
## [7284,] -1.129662e+08 -1.104368e+08 -2.558321e+11 -1.624314e+07
## [7285,] -3.143269e+11 -3.195738e+11 -1.531991e+15 -3.813160e+09
## [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
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## [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
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## [7305,] -4.638174e+09 -4.220350e+09 -1.938895e+13 -9.657396e+07
## [7306,] -1.464470e+06 -1.239212e+06 -9.629943e+10 -7.444249e+06
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## [7309,] -3.259231e+11 -2.690548e+11 -1.535640e+15 -2.509710e+09
## [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
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## [7323,] -4.913423e+09 -4.085848e+09 -1.942586e+13 -9.540334e+07
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## [7333,] -3.344875e+11 -3.195652e+11 -1.539294e+15 -2.906760e+09
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## [7412,] -2.337480e+11 -2.259702e+11 -1.173792e+15 -2.531053e+09
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## [7421,] -2.082310e+04 -8.211704e+04 -4.167184e+10 -8.517628e+06
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## [7466,] -2.496908e+11 -2.034195e+11 -1.179356e+15 -2.229680e+09
## [7467,] -4.388150e+09 -4.088388e+09 -1.966666e+13 -9.702505e+07
## [7468,] -1.687657e+06 -1.356887e+06 -9.767873e+10 -7.590402e+06
## [7469,] -1.162578e+05 -8.521117e+04 -4.180998e+10 -8.366265e+06
## [7470,] -1.163414e+08 -1.059982e+08 -2.599909e+11 -1.590454e+07
## [7471,] -3.312401e+11 -3.090945e+11 -1.556895e+15 -3.067745e+09
## [7472,] -2.275080e+11 -2.259630e+11 -1.179356e+15 -1.976825e+09
## [7473,] -4.513836e+09 -4.223329e+09 -1.966666e+13 -1.073914e+08
## [7474,] -2.140878e+06 -1.031637e+06 -9.767873e+10 -7.467618e+06
## [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
```

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## [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
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## [7528,] -1.809539e+06 -1.521082e+06 -9.804820e+10 -7.640606e+06
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## [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
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## [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
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## [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
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## [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
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## [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
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## [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
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## [7578,] -1.161713e+08 -9.905419e+07 -2.625764e+11 -1.609994e+07
## [7579,] -3.080412e+11 -3.195263e+11 -1.572377e+15 -3.201611e+09
## [7580,] -2.562021e+11 -2.034050e+11 -1.191084e+15 -2.423727e+09
## [7581,] -4.572436e+09 -4.090440e+09 -1.986223e+13 -9.858454e+07
## [7582,] -1.802884e+06 -1.883886e+06 -9.865008e+10 -7.737056e+06
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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
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## [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
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## [7596,] -1.180172e+08 -1.039065e+08 -2.628233e+11 -1.586340e+07
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## [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
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## [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
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## [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
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## [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
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## [7636,] -2.008206e+06 -5.902358e+05 -9.911432e+10 -7.800440e+06
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## [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
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## [7656,] -1.133241e+08 -9.689708e+07 -2.643071e+11 -1.602263e+07
## [7657,] -3.387610e+11 -2.690041e+11 -1.582741e+15 -3.179345e+09
## [7658,] -2.545515e+11 -2.259375e+11 -1.198934e+15 -2.503185e+09
## [7659,] -4.890638e+09 -3.699964e+09 -1.999315e+13 -1.079464e+08
## [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
## [7662,] -1.177132e+08 -9.457040e+07 -2.644309e+11 -1.624989e+07
## [7663,] -3.279980e+11 -2.594225e+11 -1.583483e+15 -2.743385e+09
## [7664,] -2.480447e+11 -2.107771e+11 -1.199496e+15 -2.503108e+09
## [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
## [7717,] -3.269584e+11 -2.623027e+11 -2.921551e+13 -1.668253e+09
## [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
## [7734,] -6.089157e+07 -5.105321e+07 -4.895632e+09 -9.279645e+05
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## [7737,] -4.268750e+09 -3.868311e+09 -3.703234e+11 -3.024162e+07
## [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
## [7740,] -6.239478e+07 -5.105321e+07 -4.895632e+09 -9.841204e+05
## [7741,] -3.226751e+11 -2.787514e+11 -1.589422e+15 -3.147121e+09
## [7742,] -2.220918e+11 -2.416169e+11 -1.203995e+15 -2.617407e+09
## [7743,] -4.351083e+09 -4.227700e+09 -2.007754e+13 -1.050641e+08
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## [7745,] -8.195946e+04 -2.234466e+05 -4.268348e+10 -8.564767e+06
## [7746,] -1.086785e+08 -1.091780e+08 -2.654227e+11 -1.657088e+07
## [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
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## [7750,] -1.811678e+06 -8.207731e+05 -9.981271e+10 -7.772840e+06
## [7751,] -8.327725e+04 -2.256191e+05 -4.274336e+10 -8.739870e+06
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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
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## [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
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## [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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## [7772,] -2.408156e+11 -2.182812e+11 -1.207375e+15 -2.389717e+09
## [7773,] -4.618010e+09 -4.365508e+09 -2.013390e+13 -9.881689e+07
## [7774,] -3.450418e+06 -9.554836e+05 -9.999936e+10 -7.595455e+06
## [7775,] -4.721352e+04 -2.278021e+05 -4.280329e+10 -8.814495e+06
## [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
## [7796,] -2.480295e+11 -2.336993e+11 -1.210759e+15 -2.421094e+09
## [7797,] -4.519588e+09 -3.830374e+09 -2.019033e+13 -1.037542e+08
## [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
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## [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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## [7831,] -3.279735e+11 -2.689811e+11 -1.604318e+15 -3.208443e+09
## [7832,] -2.464094e+11 -2.259157e+11 -1.215844e+15 -2.396532e+09
## [7833,] -4.850012e+09 -4.229787e+09 -2.027514e+13 -9.800601e+07
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## [7837,] -3.419950e+11 -3.194866e+11 -1.606558e+15 -3.444659e+09
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## [7839,] -4.792087e+09 -3.452561e+09 -2.029401e+13 -9.638518e+07
## [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
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## [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
## [7846,] -1.945379e+06 -7.878800e+05 -1.009352e+11 -7.993077e+06
## [7847,] -4.126411e+04 -1.555945e+05 -4.320388e+10 -9.002360e+06
## [7848,] -1.073503e+08 -1.022061e+08 -2.686588e+11 -1.660599e+07
## [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
## [7851,] -4.535112e+09 -4.367528e+09 -2.032233e+13 -9.540515e+07
## [7852,] -1.924630e+06 -7.878800e+05 -1.009352e+11 -8.005733e+06
## [7853,] -7.388248e+04 -1.967026e+05 -4.320388e+10 -8.905475e+06
## [7854,] -1.121134e+08 -1.172388e+08 -2.686588e+11 -1.617965e+07
## [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
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## [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
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```

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## [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
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## [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
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## [7989,] -4.650881e+09 -4.097383e+09 -2.053061e+13 -1.015545e+08
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## [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 -3.333833e+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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## [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
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## [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
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## [8013,] -4.044156e+09 -4.097579e+09 -2.054960e+13 -1.058488e+08
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## [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
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## [8031,] -4.780988e+09 -3.834442e+09 -2.059711e+13 -1.006098e+08
## [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
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## [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
## [8039,] -7.119895e+04 -3.783917e+05 -4.384870e+10 -9.143757e+06
## [8040,] -1.164739e+08 -1.027011e+08 -2.726685e+11 -1.661998e+07
## [8041,] -3.475220e+11 -2.719353e+11 -2.931634e+13 -1.800125e+09
## [8042,] -2.476208e+11 -2.133734e+11 -2.220728e+13 -1.395516e+09
## [8043,] -4.365022e+09 -3.244732e+09 -3.703234e+11 -2.809399e+07
## [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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## [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
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## [8071,] -3.343761e+11 -2.787046e+11 -1.632812e+15 -3.142150e+09
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## [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
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## [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
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## [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
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## [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
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## [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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## [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
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## [8152,] -1.180582e+06 -9.941094e+05 -1.033889e+11 -8.083062e+06
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## [8159,] -7.582247e+04 -1.911839e+05 -4.433546e+10 -9.023649e+06
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## [8171,] -1.165706e+05 -3.442284e+05 -4.439649e+10 -9.313819e+06
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## [8175,] -4.597787e+09 -3.968047e+09 -2.088331e+13 -9.383881e+07
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## [8213,] -6.429590e+04 -1.979245e+05 -4.453906e+10 -9.152540e+06
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## [8228,] -2.463540e+11 -2.258627e+11 -1.257487e+15 -2.351573e+09
## [8229,] -4.945718e+09 -3.968914e+09 -2.096955e+13 -9.848938e+07
## [8230,] -1.478708e+06 -1.460625e+06 -1.041498e+11 -8.221017e+06
## [8231,] -1.112787e+05 -3.523455e+05 -4.457984e+10 -9.343843e+06
## [8232,] -1.142374e+08 -1.008418e+08 -2.772150e+11 -1.651272e+07
## [8233,] -3.332665e+11 -2.886016e+11 -1.660797e+15 -2.943694e+09
## [8234,] -2.423435e+11 -2.258620e+11 -1.258062e+15 -2.568708e+09
```

```
## [8235,] -4.727470e+09 -4.101982e+09 -2.097915e+13 -1.046216e+08
## [8236,] -1.284186e+06 -8.271544e+05 -1.041975e+11 -8.148578e+06
## [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
## [8260,] -1.632758e+06 -8.188359e+05 -1.044836e+11 -8.230309e+06
## [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
## [8264,] -2.577493e+11 -2.106992e+11 -1.262669e+15 -2.120845e+09
## [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
## [8274,] -1.138731e+08 -1.108290e+08 -2.783575e+11 -1.666622e+07
## [8275,] -3.551280e+11 -2.986954e+11 -1.666879e+15 -2.803163e+09
## [8276,] -2.336320e+11 -2.495786e+11 -1.262669e+15 -2.510860e+09
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## [8279,] -1.093296e+05 -2.523551e+05 -4.476357e+10 -9.170756e+06
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## [8284,] -1.665178e+06 -1.822720e+06 -1.046268e+11 -8.355191e+06
## [8285,] -1.002973e+05 -4.890807e+05 -4.478401e+10 -9.357573e+06
## [8286,] -1.164743e+08 -9.861966e+07 -2.786117e+11 -1.692395e+07
## [8287,] -3.089679e+11 -2.986938e+11 -1.668401e+15 -3.514232e+09
## [8288,] -2.415380e+11 -2.033168e+11 -1.263823e+15 -2.422084e+09
## [8289,] -4.642550e+09 -3.710569e+09 -2.107521e+13 -8.853430e+07
## [8290,] -1.680517e+06 -1.102992e+06 -1.047224e+11 -8.290855e+06
## [8291,] -1.385239e+05 -1.652649e+05 -4.482490e+10 -9.154935e+06
## [8292,] -1.136667e+08 -1.034459e+08 -2.787389e+11 -1.708816e+07
```

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## [8293,] -3.173105e+11 -2.986921e+11 -1.669924e+15 -3.003681e+09
## [8294,] -2.618808e+11 -2.258533e+11 -1.264976e+15 -2.535000e+09
## [8295,] -4.251978e+09 -4.657032e+09 -2.109444e+13 -9.952019e+07
## [8296,] -9.504112e+05 -1.436713e+06 -1.047701e+11 -8.235221e+06
## [8297,] -1.049083e+05 -3.074296e+05 -4.484535e+10 -9.132854e+06
## [8298,] -1.149624e+08 -1.034614e+08 -2.788661e+11 -1.679892e+07
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## [8300,] -2.479564e+11 -2.336283e+11 -1.265553e+15 -2.173110e+09
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## [8304,] -1.180956e+08 -1.160241e+08 -2.791205e+11 -1.724598e+07
## [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
## [8308,] -1.112256e+06 -9.459468e+05 -1.049135e+11 -8.214148e+06
## [8309,] -7.722600e+04 -1.683859e+05 -4.492720e+10 -9.288380e+06
## [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
## [8312,] -2.258504e+11 -2.336261e+11 -1.267285e+15 -2.453672e+09
## [8313,] -4.932832e+09 -3.839744e+09 -2.113295e+13 -9.853948e+07
## [8314,] -1.465284e+06 -1.613288e+06 -1.049614e+11 -8.308572e+06
## [8315,] -5.695430e+04 -3.679359e+05 -4.492720e+10 -9.321302e+06
## [8316,] -1.067292e+08 -1.135093e+08 -2.795024e+11 -1.713599e+07
## [8317,] -3.246987e+11 -2.593291e+11 -1.673734e+15 -3.436681e+09
## [8318,] -2.511953e+11 -1.960626e+11 -1.267863e+15 -2.172825e+09
## [8319,] -4.845121e+09 -3.711221e+09 -2.114258e+13 -9.876257e+07
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## [8321,] -9.192289e+04 -2.117561e+05 -4.494768e+10 -9.251211e+06
## [8322,] -1.124917e+08 -1.135093e+08 -2.795024e+11 -1.701732e+07
## [8323,] -3.397381e+11 -2.855906e+11 -1.674497e+15 -3.382173e+09
## [8324,] -2.471454e+11 -1.960619e+11 -1.268440e+15 -2.421482e+09
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## [8332,] -1.454205e+06 -1.601662e+06 -1.052485e+11 -8.202063e+06
## [8333,] -5.448701e+04 -7.169731e+04 -4.505012e+10 -9.223741e+06
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## [8335,] -3.268221e+11 -2.689042e+11 -1.677549e+15 -3.263631e+09
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## [8339,] -1.901695e+05 -2.167075e+05 -4.509113e+10 -9.316692e+06
## [8340,] -1.138786e+08 -1.060989e+08 -2.803945e+11 -1.707136e+07
## [8341,] -3.162511e+11 -2.786554e+11 -1.679076e+15 -3.274113e+09
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## [8344,] -1.325736e+06 -9.311412e+05 -1.053923e+11 -8.253721e+06
## [8345,] -6.519805e+04 -2.174195e+05 -4.511165e+10 -9.306386e+06
## [8346,] -1.182783e+08 -9.884744e+07 -2.805220e+11 -1.702826e+07
## [8347,] -3.397319e+11 -2.689018e+11 -1.679840e+15 -3.126410e+09
## [8348,] -2.577361e+11 -2.106873e+11 -1.272488e+15 -2.349647e+09
## [8349,] -4.715712e+09 -3.711965e+09 -2.121970e+13 -1.020311e+08
## [8350,] -1.175672e+06 -1.080636e+06 -1.053923e+11 -8.253721e+06
```

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## [8352,] -1.238074e+08 -1.012412e+08 -2.805220e+11 -1.701839e+07
## [8353,] -3.236305e+11 -2.499175e+11 -1.679840e+15 -3.327571e+09
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## [8356,] -1.672127e+06 -7.927710e+05 -1.053923e+11 -8.300926e+06
## [8357,] -1.057122e+04 -3.185441e+05 -4.511165e+10 -9.378360e+06
## [8358,] -1.128755e+08 -1.036636e+08 -2.805220e+11 -1.716681e+07
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## [8360,] -2.528172e+11 -2.181990e+11 -1.273066e+15 -2.333871e+09
## [8361,] -4.963357e+09 -4.239732e+09 -2.122936e+13 -9.931609e+07
## [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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## [8373,] -4.106404e+09 -3.612490e+09 -3.728773e+11 -2.529867e+07
## [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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## [8390,] -2.435985e+11 -2.209310e+11 -2.243721e+13 -1.092640e+09
## [8391,] -3.986662e+09 -3.612582e+09 -3.741576e+11 -2.626296e+07
## [8392,] -1.764061e+07 -1.336370e+07 -1.858335e+09 -1.466746e+04
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## [8399,] -6.735689e+06 -5.755633e+06 -7.954336e+08 -5.241458e+04
## [8400,] -6.112626e+07 -6.000872e+07 -4.963274e+09 -9.154520e+05
## [8401,] -3.300215e+11 -2.986787e+11 -1.682133e+15 -3.316563e+09
## [8402,] -2.391385e+11 -2.106852e+11 -1.274224e+15 -2.210011e+09
## [8403,] -4.788177e+09 -3.585800e+09 -2.124866e+13 -9.583128e+07
## [8404,] -1.252791e+06 -1.075875e+06 -1.055361e+11 -8.219790e+06
## [8405,] -6.637395e+04 -3.211370e+05 -4.517321e+10 -9.305407e+06
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```

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## [8412,] -1.292775e+08 -1.162876e+08 -2.811602e+11 -1.688234e+07
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## [8418,] -1.134823e+08 -1.013335e+08 -2.812879e+11 -1.804879e+07
## [8419,] -3.440862e+11 -3.089500e+11 -1.684427e+15 -3.556657e+09
## [8420,] -2.415222e+11 -2.033023e+11 -1.275962e+15 -2.775884e+09
## [8421,] -4.659118e+09 -4.105115e+09 -2.128731e+13 -1.074965e+08
## [8422,] -1.526591e+06 -5.415028e+05 -1.057280e+11 -8.284484e+06
## [8423,] -1.217935e+05 -4.460380e+05 -4.525536e+10 -9.276190e+06
## [8424,] -1.152904e+08 -1.137537e+08 -2.814157e+11 -1.696383e+07
## [8425,] -2.966415e+11 -3.193967e+11 -1.685192e+15 -3.125812e+09
## [8426,] -2.544467e+11 -2.033016e+11 -1.276542e+15 -2.202104e+09
## [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
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## [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
## [8449,] -2.996891e+11 -3.089433e+11 -1.690552e+15 -3.347873e+09
## [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
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## [8454,] -1.180072e+08 -1.038972e+08 -2.824388e+11 -1.703398e+07
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## [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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## [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
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## [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
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## [8524,] -1.830569e+06 -7.538007e+05 -1.067867e+11 -8.446440e+06
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## [8534,] -2.463115e+11 -1.889196e+11 -1.289907e+15 -2.564449e+09
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## [8537,] -2.352880e+05 -3.458442e+05 -4.574984e+10 -9.358199e+06
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## [8540,] -2.399108e+11 -2.181769e+11 -1.291072e+15 -2.207928e+09
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## [8608,] -1.419909e+06 -8.659614e+05 -1.075600e+11 -8.327190e+06
## [8609,] -1.319934e+05 -4.070810e+05 -4.603953e+10 -9.447877e+06
## [8610,] -1.213890e+08 -1.169478e+08 -2.862919e+11 -1.722373e+07
## [8611,] -3.418681e+11 -2.786183e+11 -1.714392e+15 -3.132990e+09
## [8612,] -2.383145e+11 -2.106557e+11 -1.298661e+15 -2.094152e+09
## [8613,] -4.763680e+09 -4.381578e+09 -2.165616e+13 -9.625519e+07
## [8614,] -1.547052e+06 -3.997427e+05 -1.075600e+11 -8.508951e+06
## [8615,] -1.255013e+05 -2.046436e+05 -4.606025e+10 -9.582732e+06
## [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
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## [8664,] -1.163704e+08 -1.021196e+08 -2.878405e+11 -1.755971e+07
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## [8668,] -1.243912e+06 -7.171061e+05 -1.081418e+11 -8.619366e+06
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## [8691,] -4.693391e+09 -3.717647e+09 -2.181242e+13 -1.048956e+08
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## [8693,] -1.164142e+05 -2.151452e+05 -4.637172e+10 -9.580802e+06
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## [8698,] -1.171632e+06 -1.304355e+06 -1.083361e+11 -8.089563e+06
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## [8701,] -3.205903e+11 -2.719321e+11 -2.972140e+13 -1.607596e+09
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## [8704,] -1.801201e+07 -1.562775e+07 -1.864705e+09 -9.606500e+03
## [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
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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
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## [8716,] -1.744039e+07 -1.335252e+07 -1.871085e+09 -1.066064e+04
## [8717,] -6.702334e+06 -5.064249e+06 -8.008911e+08 -4.890733e+04
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## [8719,] -3.216457e+11 -2.622980e+11 -2.982310e+13 -1.690794e+09
## [8720,] -2.607022e+11 -1.986452e+11 -2.259115e+13 -1.097908e+09
## [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
## [8723,] -7.219980e+06 -5.064249e+06 -8.008911e+08 -5.609684e+04
## [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
## [8728,] -1.725402e+07 -1.446487e+07 -1.871085e+09 -1.892029e+04
## [8729,] -6.727759e+06 -5.287454e+06 -8.008911e+08 -5.939724e+04
## [8730,] -6.551801e+07 -5.283309e+07 -4.980257e+09 -8.738895e+05
## [8731,] -3.353451e+11 -2.592746e+11 -1.727537e+15 -3.618518e+09
## [8732,] -2.430773e+11 -2.257988e+11 -1.308618e+15 -2.720370e+09
## [8733,] -4.765474e+09 -4.383298e+09 -2.182220e+13 -9.651025e+07
## [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
## [8744,] -2.651508e+11 -2.106417e+11 -1.310379e+15 -2.085338e+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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```

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## [8791,] -3.267566e+11 -2.688448e+11 -1.735292e+15 -3.120260e+09
## [8792,] -2.503217e+11 -2.106368e+11 -1.314493e+15 -2.383756e+09
## [8793,] -4.510044e+09 -4.111580e+09 -2.192998e+13 -1.059436e+08
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## [8796,] -1.140803e+08 -1.097761e+08 -2.900415e+11 -1.759839e+07
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## [8798,] -2.609833e+11 -2.106354e+11 -1.315669e+15 -2.352029e+09
## [8799,] -4.510147e+09 -4.247000e+09 -2.193979e+13 -1.125222e+08
## [8800,] -9.942922e+05 -1.639796e+06 -1.090175e+11 -8.581933e+06
## [8801,] -3.288035e+05 -4.509507e+05 -4.668423e+10 -9.657988e+06
## [8802,] -1.221760e+08 -1.000056e+08 -2.903009e+11 -1.745089e+07
## [8803,] -3.418404e+11 -2.688416e+11 -1.738399e+15 -3.119919e+09
## [8804,] -2.543927e+11 -2.257879e+11 -1.317435e+15 -2.375469e+09
## [8805,] -4.883380e+09 -4.111972e+09 -2.196924e+13 -1.000578e+08
## [8806,] -1.872827e+06 -4.656415e+05 -1.091150e+11 -8.709336e+06
## [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
## [8840,] -2.593229e+11 -2.257850e+11 -1.319791e+15 -2.304545e+09
## [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
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## [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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## [8887,] -3.407407e+11 -2.885088e+11 -1.747737e+15 -2.904118e+09
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## [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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## [8901,] -4.498047e+09 -4.113540e+09 -2.212662e+13 -1.073401e+08
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## [8905,] -3.057753e+11 -3.088753e+11 -1.752415e+15 -3.705798e+09
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## [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
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## [8918,] -2.527435e+11 -1.888751e+11 -1.329237e+15 -2.031596e+09
## [8919,] -4.697265e+09 -5.258256e+09 -2.217591e+13 -1.063372e+08
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## [8921,] -1.090468e+05 -3.483653e+05 -4.714448e+10 -9.768891e+06
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## [8927,] -1.717133e+05 -4.748639e+05 -4.716545e+10 -9.955481e+06
## [8928,] -1.188835e+08 -1.052098e+08 -2.932934e+11 -1.782971e+07
## [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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## [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
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## [8937,] -4.740509e+09 -3.721189e+09 -2.218578e+13 -1.027148e+08
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## [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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## [8963,] -9.674776e+04 -2.986802e+05 -4.729139e+10 -9.854648e+06
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## [8969,] -1.561858e+05 -4.165350e+05 -4.731240e+10 -9.967568e+06
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## [8972,] -2.626185e+11 -2.494847e+11 -1.334566e+15 -2.225518e+09
## [8973,] -4.741246e+09 -3.981633e+09 -2.225490e+13 -1.002918e+08
## [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
## [8976,] -1.153731e+08 -1.102891e+08 -2.942072e+11 -1.766305e+07
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## [8981,] -2.407907e+05 -3.020304e+05 -4.737545e+10 -9.729476e+06
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## [8986,] -1.590772e+06 -1.061026e+06 -1.107302e+11 -8.796763e+06
## [8987,] -1.471052e+05 -4.204897e+05 -4.739647e+10 -9.722002e+06
## [8988,] -1.183013e+08 -1.053980e+08 -2.948607e+11 -1.845830e+07
```

```
## [8989,] -2.996079e+11 -3.299267e+11 -1.765704e+15 -3.784055e+09
## [8990,] -2.486712e+11 -2.106094e+11 -1.337530e+15 -2.349288e+09
## [8991,] -4.612929e+09 -3.982115e+09 -2.230434e+13 -1.151354e+08
## [8992,] -1.268440e+06 -1.059452e+06 -1.107793e+11 -8.603293e+06
## [8993,] -1.592202e+05 -3.037125e+05 -4.741750e+10 -9.677870e+06
## [8994,] -1.154716e+08 -1.154716e+08 -2.949915e+11 -1.770161e+07
## [8995,] -2.996071e+11 -2.785642e+11 -1.766488e+15 -3.513776e+09
## [8996,] -2.406461e+11 -1.888651e+11 -1.338124e+15 -2.333513e+09
## [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
```

```
## [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
## [9054,] -6.173691e+07 -5.286643e+07 -5.031380e+09 -9.820051e+05
## [9055,] -3.142857e+11 -2.817359e+11 -3.012924e+13 -1.752475e+09
## [9056,] -2.590458e+11 -2.133677e+11 -2.282305e+13 -1.270711e+09
## [9057,] -4.255881e+09 -3.613041e+09 -3.805918e+11 -2.640960e+07
## [9058,] -1.767117e+07 -1.388604e+07 -1.890292e+09 -1.327925e+04
## [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
## [9070,] -1.045342e+06 -1.203408e+06 -1.112220e+11 -8.683197e+06
## [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
## [9081,] -4.888294e+09 -4.529254e+09 -2.242322e+13 -9.804910e+07
## [9082,] -1.453984e+06 -5.199052e+05 -1.114190e+11 -8.833717e+06
## [9083,] -2.142954e+05 -2.621211e+05 -4.769132e+10 -9.828777e+06
## [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
## [9088,] -1.543404e+06 -7.559252e+05 -1.114683e+11 -9.003094e+06
## [9089,] -1.446188e+05 -4.354862e+05 -4.771241e+10 -9.855118e+06
## [9090,] -1.195787e+08 -1.056178e+08 -2.966946e+11 -1.755392e+07
## [9091,] -3.309859e+11 -2.785538e+11 -1.776686e+15 -2.931269e+09
## [9092,] -2.350978e+11 -2.335272e+11 -1.345849e+15 -2.170913e+09
## [9093,] -4.238541e+09 -4.252180e+09 -2.245298e+13 -1.219943e+08
## [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
## [9099,] -4.844911e+09 -3.597157e+09 -2.246291e+13 -1.033616e+08
## [9100,] -1.342753e+06 -1.034433e+06 -1.115669e+11 -8.896220e+06
## [9101,] -1.347617e+05 -3.750150e+05 -4.775462e+10 -9.898642e+06
## [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
```



```
## [9105,] -4.614901e+09 -4.671958e+09 -2.249271e+13 -1.025585e+08
## [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
## [9108,] -1.163160e+08 -1.132392e+08 -2.976137e+11 -1.756866e+07
## [9109,] -3.299083e+11 -2.785481e+11 -1.782190e+15 -3.230631e+09
## [9110,] -2.519017e+11 -2.032155e+11 -1.350018e+15 -2.475190e+09
## [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
## [9125,] -1.373434e+05 -2.243143e+05 -4.798708e+10 -1.001981e+07
## [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
## [9138,] -1.200749e+08 -1.033899e+08 -2.985342e+11 -1.808877e+07
## [9139,] -3.067688e+11 -2.985651e+11 -1.787702e+15 -3.533456e+09
## [9140,] -2.535274e+11 -2.494595e+11 -1.354193e+15 -2.498928e+09
## [9141,] -4.744719e+09 -4.118050e+09 -2.258221e+13 -9.870688e+07
## [9142,] -1.408714e+06 -4.032288e+05 -1.121595e+11 -8.853096e+06
## [9143,] -1.652152e+05 -5.921159e+05 -4.802940e+10 -9.874731e+06
## [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
## [9146,] -2.709711e+11 -2.494587e+11 -1.354790e+15 -2.238392e+09
## [9147,] -4.890110e+09 -4.391194e+09 -2.259217e+13 -1.072168e+08
## [9148,] -9.845025e+05 -1.014325e+06 -1.122089e+11 -8.786758e+06
## [9149,] -1.242592e+05 -1.075682e+05 -4.802940e+10 -9.942677e+06
## [9150,] -1.206167e+08 -1.034055e+08 -2.986658e+11 -1.801392e+07
## [9151,] -3.088354e+11 -2.884653e+11 -1.789278e+15 -3.500113e+09
## [9152,] -2.406244e+11 -2.335153e+11 -1.355388e+15 -2.515021e+09
## [9153,] -4.730521e+09 -3.598441e+09 -2.260212e+13 -1.033663e+08
## [9154,] -1.265482e+06 -6.113201e+05 -1.123078e+11 -8.937950e+06
## [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
## [9157,] -3.483510e+11 -2.687893e+11 -1.790067e+15 -2.819930e+09
## [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
## [9160,] -1.011249e+06 -1.011249e+06 -1.123078e+11 -8.875628e+06
## [9161,] -8.757384e+04 -4.538288e+05 -4.809293e+10 -9.994326e+06
## [9162,] -1.251777e+08 -1.108837e+08 -2.990608e+11 -1.779029e+07
```

```
## [9163,] -3.320433e+11 -2.592116e+11 -1.790855e+15 -3.325717e+09
## [9164,] -2.390339e+11 -2.032079e+11 -1.356582e+15 -2.450203e+09
## [9165,] -4.602040e+09 -4.118443e+09 -2.262205e+13 -1.053220e+08
## [9166,] -1.419181e+06 -1.009713e+06 -1.123573e+11 -8.942519e+06
## [9167,] -2.232877e+05 -3.312618e+05 -4.809293e+10 -9.944759e+06
## [9168,] -1.191115e+08 -1.059164e+08 -2.991925e+11 -1.787760e+07
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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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## [9177,] -4.159039e+09 -4.531517e+09 -2.264198e+13 -1.064304e+08
## [9178,] -1.311066e+06 -7.295840e+05 -1.124563e+11 -8.902639e+06
## [9179,] -1.603810e+05 -5.245437e+05 -4.813530e+10 -9.923469e+06
## [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
## [9182,] -2.568000e+11 -2.257378e+11 -1.358375e+15 -2.449976e+09
## [9183,] -4.659330e+09 -3.985491e+09 -2.265195e+13 -1.066622e+08
## [9184,] -1.361020e+06 -4.959449e+05 -1.125058e+11 -8.898298e+06
## [9185,] -2.356143e+05 -3.347895e+05 -4.817769e+10 -9.902201e+06
## [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
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## [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
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## [9206,] -2.494488e+11 -1.818537e+11 -1.362564e+15 -2.361920e+09
## [9207,] -5.083674e+09 -3.986167e+09 -2.272179e+13 -1.107016e+08
## [9208,] -9.057161e+05 -9.928907e+05 -1.129023e+11 -8.881384e+06
## [9209,] -1.248849e+05 -6.086942e+05 -4.832621e+10 -1.004132e+07
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## [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
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## [9215,] -2.570445e+05 -5.860731e+04 -4.836868e+10 -9.945530e+06
## [9216,] -1.180248e+08 -1.086007e+08 -3.009077e+11 -1.839023e+07
## [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
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## [9224,] -2.382294e+11 -2.335021e+11 -1.366159e+15 -2.448992e+09
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## [9233,] -1.079394e+05 -6.952739e+05 -4.845369e+10 -1.006729e+07
## [9234,] -1.225371e+08 -1.086485e+08 -3.013042e+11 -1.845100e+07
## [9235,] -3.406765e+11 -2.785255e+11 -1.804289e+15 -3.476380e+09
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## [9368,] -2.665305e+11 -1.986432e+11 -2.282305e+13 -1.213538e+09
## [9369,] -4.365830e+09 -3.245428e+09 -3.805918e+11 -2.523954e+07
## [9370,] -1.519387e+07 -1.501995e+07 -1.890292e+09 -1.327925e+04
## [9371,] -6.920825e+06 -5.276916e+06 -8.091123e+08 -5.625331e+04
## [9372,] -6.061379e+07 -5.821572e+07 -5.031380e+09 -9.560902e+05
## [9373,] -3.205869e+11 -2.917167e+11 -3.012924e+13 -1.652502e+09
## [9374,] -2.516676e+11 -2.133677e+11 -2.282305e+13 -1.219196e+09
## [9375,] -4.338212e+09 -3.365775e+09 -3.805918e+11 -2.523954e+07
## [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
## [9422,] -2.358368e+11 -2.105540e+11 -1.384809e+15 -2.430625e+09
## [9423,] -4.954215e+09 -3.989737e+09 -2.309275e+13 -1.020040e+08
## [9424,] -1.216992e+06 -5.553099e+05 -1.146952e+11 -9.167637e+06
## [9425,] -2.247778e+05 -3.163054e+05 -4.909362e+10 -1.019761e+07
## [9426,] -1.214574e+08 -1.116414e+08 -3.052835e+11 -1.818628e+07
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## [9429,] -4.750300e+09 -3.989931e+09 -2.311289e+13 -1.111089e+08
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## [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
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## [9437,] -3.423301e+05 -4.403405e+05 -4.917926e+10 -1.016077e+07
## [9438,] -1.129743e+08 -1.247114e+08 -3.058160e+11 -1.831464e+07
## [9439,] -3.483041e+11 -2.784981e+11 -1.831308e+15 -2.835528e+09
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## [9451,] -3.363048e+11 -2.985159e+11 -1.834499e+15 -2.865056e+09
## [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
## [9457,] -3.493997e+11 -2.591672e+11 -1.836096e+15 -2.854924e+09
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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
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## [9473,] -2.552191e+05 -1.820736e+05 -4.941516e+10 -1.014868e+07
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## [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
## [9479,] -1.623578e+05 -4.525942e+05 -4.943663e+10 -1.027899e+07
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## [9481,] -3.192249e+11 -2.591625e+11 -1.840891e+15 -3.384923e+09
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## [9484,] -9.152824e+05 -1.393446e+06 -1.154965e+11 -9.182969e+06
## [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
## [9488,] -2.551105e+11 -2.180513e+11 -1.395697e+15 -2.271979e+09
## [9489,] -5.044966e+09 -4.124820e+09 -2.327431e+13 -9.975733e+07
## [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
## [9494,] -2.485958e+11 -2.180499e+11 -1.396909e+15 -2.381380e+09
## [9495,] -4.651721e+09 -3.991668e+09 -2.329452e+13 -1.068077e+08
## [9496,] -6.592563e+05 -1.567420e+06 -1.156973e+11 -9.192457e+06
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## [9499,] -3.087759e+11 -2.784844e+11 -1.844892e+15 -3.036085e+09
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## [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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## [9519,] -4.680841e+09 -3.992151e+09 -2.334510e+13 -1.066703e+08
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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
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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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## [9538,] -1.401612e+06 -7.580527e+05 -1.162503e+11 -9.384614e+06
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## [9540,] -1.209251e+08 -1.046681e+08 -3.094229e+11 -1.798066e+07
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## [9542,] -2.502078e+11 -2.031542e+11 -1.403586e+15 -2.665665e+09
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## [9544,] -1.295921e+06 -1.364731e+06 -1.163007e+11 -8.964579e+06
## [9545,] -1.806028e+05 -6.132335e+05 -4.978083e+10 -1.036070e+07
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## [9557,] -2.293803e+05 -4.691940e+05 -4.978083e+10 -1.025360e+07
## [9558,] -1.214689e+08 -1.046838e+08 -3.095569e+11 -1.871502e+07
## [9559,] -3.319729e+11 -2.591493e+11 -1.854511e+15 -2.933253e+09
## [9560,] -2.542794e+11 -2.413585e+11 -1.405410e+15 -2.309633e+09
## [9561,] -4.483408e+09 -3.732852e+09 -2.343628e+13 -1.094243e+08
## [9562,] -1.020244e+06 -8.891537e+05 -1.164014e+11 -9.212113e+06
## [9563,] -2.411208e+05 -5.421777e+05 -4.984551e+10 -1.036914e+07
## [9564,] -1.196796e+08 -1.022958e+08 -3.099590e+11 -1.825115e+07
## [9565,] -3.077292e+11 -3.087640e+11 -1.856117e+15 -3.201429e+09
## [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
```



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## [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
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## [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
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## [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
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```

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## [9627,] -4.915361e+09 -4.541193e+09 -2.358865e+13 -1.008608e+08
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## [9629,] -2.184612e+05 -4.210845e+05 -5.014786e+10 -1.050483e+07
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## [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
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## [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
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## [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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## [9661,] -3.438729e+11 -2.883808e+11 -1.871405e+15 -3.147284e+09
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## [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
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## [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
## [9669,] -4.655474e+09 -4.264148e+09 -2.365992e+13 -1.086824e+08
## [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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## [9681,] -4.684606e+09 -3.864405e+09 -2.371090e+13 -1.046538e+08
## [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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## [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
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## [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
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## [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
## [9722,] -2.445337e+11 -1.958847e+11 -1.424325e+15 -2.385943e+09
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## [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
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## [9729,] -4.403051e+09 -4.129631e+09 -2.377214e+13 -1.011372e+08
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## [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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## [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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## [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
## [9753,] -4.657247e+09 -3.865545e+09 -2.383346e+13 -1.029214e+08
## [9754,] -8.338396e+05 -5.836790e+05 -1.183741e+11 -9.526951e+06
## [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
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## [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
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## [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
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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
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## [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
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## [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
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## [9791,] -3.007719e+05 -5.185837e+05 -5.077708e+10 -1.057226e+07
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## [9804,] -1.222787e+08 -1.104079e+08 -3.160226e+11 -1.846378e+07
## [9805,] -3.308584e+11 -2.984558e+11 -1.892427e+15 -3.176493e+09
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## [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
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## [9863,] -2.841612e+05 -6.846108e+05 -5.103859e+10 -1.050439e+07
## [9864,] -1.190458e+08 -1.182637e+08 -3.175138e+11 -1.890888e+07
## [9865,] -3.427476e+11 -2.883504e+11 -1.901357e+15 -3.123243e+09
## [9866,] -2.469267e+11 -2.179992e+11 -1.440288e+15 -2.391931e+09
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## [9868,] -9.779021e+05 -4.565096e+05 -1.192901e+11 -9.547415e+06
## [9869,] -2.644108e+05 -6.070260e+05 -5.106041e+10 -1.061457e+07
## [9870,] -1.203550e+08 -1.056083e+08 -3.175138e+11 -1.890888e+07
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## [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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## [9919,] -3.308400e+11 -2.883422e+11 -1.909493e+15 -3.464586e+09
## [9920,] -2.599861e+11 -2.031060e+11 -1.446451e+15 -2.536113e+09
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## [9924,] -1.237303e+08 -1.082729e+08 -3.191445e+11 -1.927134e+07
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## [9938,] -2.525914e+11 -2.413052e+11 -1.448919e+15 -2.128779e+09
## [9939,] -4.717922e+09 -4.133364e+09 -2.416184e+13 -9.962185e+07
## [9940,] -1.204548e+06 -6.627851e+05 -1.200050e+11 -9.785521e+06
## [9941,] -3.294347e+05 -2.965126e+05 -5.136642e+10 -1.071007e+07
## [9942,] -1.190181e+08 -1.083047e+08 -3.194167e+11 -1.899160e+07
## [9943,] -3.202019e+11 -2.686681e+11 -1.912752e+15 -3.184851e+09
## [9944,] -2.525914e+11 -2.104804e+11 -1.448919e+15 -2.304421e+09
## [9945,] -4.546962e+09 -4.546962e+09 -2.416184e+13 -1.034181e+08
## [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
## [9971,] -2.190330e+05 -4.218782e+05 -5.156363e+10 -1.078411e+07
## [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
## [9974,] -2.461037e+11 -2.030970e+11 -1.454482e+15 -1.853247e+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
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## [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
## [9984,] -1.242179e+08 -1.084797e+08 -3.209158e+11 -1.898143e+07
## [9985,] -3.351292e+11 -2.883299e+11 -1.921729e+15 -3.121109e+09
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## [9987,] -4.576373e+09 -4.408021e+09 -2.427524e+13 -1.070260e+08
## [9988,] -8.835136e+05 -4.310600e+05 -1.205682e+11 -9.550249e+06
## [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
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## [9994,] -1.014202e+06 -5.345527e+05 -1.205682e+11 -9.721564e+06
## [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
## [9998,] -2.420946e+11 -2.179814e+11 -1.455720e+15 -2.398000e+09
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## [10000,] -1.551846e+06 -6.491697e+05 -1.205682e+11 -9.810128e+06
## [10001,] -1.307636e+05 -8.937712e+05 -5.160750e+10 -1.081349e+07
## [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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## [10009,] -3.405436e+11 -2.883274e+11 -1.924181e+15 -2.865953e+09
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## [10014,] -1.229387e+08 -1.187295e+08 -3.213253e+11 -1.902228e+07
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## [10023,] -4.103268e+09 -3.596983e+09 -1.880310e+11 -2.381153e+07
## [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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## [10027,] -3.260383e+11 -3.020181e+11 -1.488532e+13 -1.325274e+09
## [10028,] -2.381517e+11 -2.287459e+11 -1.133025e+13 -1.032319e+09
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## [10031,] -8.185649e+06 -6.388080e+06 -4.036128e+08 -1.207800e+04
## [10032,] -6.267177e+07 -5.096153e+07 -2.509823e+09 -7.049617e+05
```



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## [10036,] -1.892300e+07 -1.605597e+07 -9.474808e+08 -4.490724e+02
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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
## [10051,] -3.205860e+11 -2.917158e+11 -3.023163e+13 -1.592378e+09
## [10052,] -2.532972e+11 -1.986425e+11 -2.290062e+13 -1.202208e+09
## [10053,] -4.310881e+09 -3.869262e+09 -3.831809e+11 -2.289333e+07
## [10054,] -1.666969e+07 -1.559152e+07 -1.903151e+09 -1.977554e+04
## [10055,] -6.506201e+06 -6.209348e+06 -8.146165e+08 -6.200483e+04
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## [10069,] -3.366115e+11 -3.121976e+11 -3.033420e+13 -1.644809e+09
## [10070,] -2.573954e+11 -1.986418e+11 -2.297831e+13 -1.230444e+09
## [10071,] -4.269748e+09 -3.740148e+09 -3.831809e+11 -2.546572e+07
## [10072,] -1.848256e+07 -1.332462e+07 -1.903151e+09 -1.656225e+04
## [10073,] -6.758873e+06 -5.729996e+06 -8.146165e+08 -5.239289e+04
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## [10076,] -2.427924e+11 -2.606975e+11 -2.305614e+13 -1.174142e+09
## [10077,] -4.242535e+09 -3.740241e+09 -3.844787e+11 -2.442789e+07
## [10078,] -1.746440e+07 -1.278024e+07 -1.909597e+09 -1.434356e+04
## [10079,] -6.602764e+06 -5.266390e+06 -8.173755e+08 -5.548177e+04
## [10080,] -6.233854e+07 -4.665526e+07 -5.082763e+09 -9.699840e+05
## [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
## [10088,] -2.599681e+11 -2.412910e+11 -1.460675e+15 -2.248850e+09
## [10089,] -4.662567e+09 -4.270937e+09 -2.435788e+13 -1.045681e+08
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```

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## [10103,] -4.156872e+05 -5.019902e+05 -5.184915e+10 -1.065641e+07
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## [10111,] -3.254766e+11 -3.297441e+11 -1.932366e+15 -2.855166e+09
## [10112,] -2.157057e+11 -2.412872e+11 -1.463777e+15 -2.287117e+09
## [10113,] -4.437184e+09 -4.135722e+09 -2.440960e+13 -1.105078e+08
## [10114,] -1.228213e+06 -6.320453e+05 -1.212870e+11 -9.779058e+06
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## [10120,] -9.632675e+05 -3.263543e+05 -1.212870e+11 -9.732470e+06
## [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
## [10124,] -2.624501e+11 -2.104622e+11 -1.465018e+15 -2.294735e+09
## [10125,] -4.381786e+09 -4.135919e+09 -2.443030e+13 -1.092233e+08
## [10126,] -9.617682e+05 -3.254818e+05 -1.213384e+11 -9.793172e+06
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## [10128,] -1.231421e+08 -1.062375e+08 -3.229657e+11 -1.930161e+07
## [10129,] -3.351159e+11 -2.883176e+11 -1.934005e+15 -3.288634e+09
## [10130,] -2.525714e+11 -2.179707e+11 -1.465018e+15 -2.836322e+09
## [10131,] -4.634752e+09 -4.135919e+09 -2.443030e+13 -1.131967e+08
## [10132,] -1.143679e+06 -6.296177e+05 -1.213898e+11 -9.919723e+06
## [10133,] -3.419725e+05 -6.568265e+05 -5.195917e+10 -1.075203e+07
## [10134,] -1.215875e+08 -1.163668e+08 -3.232395e+11 -1.896950e+07
## [10135,] -3.351141e+11 -2.883159e+11 -1.935644e+15 -3.203502e+09
## [10136,] -2.550218e+11 -2.104608e+11 -1.466261e+15 -2.310158e+09
## [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
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## [10145,] -3.455567e+05 -6.617901e+05 -5.204727e+10 -1.090452e+07
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## [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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## [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
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## [10156,] -1.008853e+06 -5.091621e+05 -1.217502e+11 -9.812771e+06
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## [10158,] -1.193241e+08 -1.190628e+08 -3.240617e+11 -1.913488e+07
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## [10160,] -2.263754e+11 -2.256042e+11 -1.470612e+15 -2.557667e+09
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## [10162,] -5.955076e+05 -8.756591e+05 -1.218532e+11 -9.897287e+06
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## [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
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## [10171,] -3.128278e+11 -3.191144e+11 -1.944675e+15 -3.901584e+09
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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
## [10320,] -1.233742e+08 -1.094369e+08 -3.291546e+11 -1.954140e+07
## [10321,] -3.307740e+11 -2.686119e+11 -1.971065e+15 -3.359898e+09
## [10322,] -2.533528e+11 -1.886965e+11 -1.493092e+15 -2.409413e+09
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## [10324,] -7.861445e+05 -6.962937e+05 -1.236636e+11 -9.891941e+06
## [10325,] -3.703873e+05 -7.976773e+05 -5.293242e+10 -1.102898e+07
## [10326,] -1.223132e+08 -1.094369e+08 -3.291546e+11 -1.962613e+07
## [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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## [10339,] -3.426689e+11 -2.882782e+11 -1.973549e+15 -3.392123e+09
## [10340,] -2.484746e+11 -2.179364e+11 -1.494973e+15 -2.345905e+09
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## [10349,] -3.237926e+05 -8.058879e+05 -5.306583e+10 -1.118051e+07
## [10350,] -1.269575e+08 -1.021474e+08 -3.299843e+11 -1.917110e+07
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## [10357,] -3.034824e+11 -2.983698e+11 -1.976862e+15 -3.305477e+09
## [10358,] -2.517168e+11 -2.179336e+11 -1.497483e+15 -2.489171e+09
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## [10362,] -1.177278e+08 -1.172091e+08 -3.302610e+11 -1.996804e+07
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## [10364,] -2.517153e+11 -1.958035e+11 -1.498739e+15 -2.695478e+09
## [10365,] -4.654643e+09 -3.876195e+09 -2.499262e+13 -1.025346e+08
## [10366,] -1.089615e+06 -2.067229e+05 -1.241313e+11 -1.007206e+07
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## [10369,] -3.286247e+11 -2.882724e+11 -1.979349e+15 -3.273143e+09
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## [10383,] -4.201829e+09 -3.869452e+09 -3.857787e+11 -2.999762e+07
## [10384,] -1.702448e+07 -1.617376e+07 -1.916054e+09 -1.211968e+04
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## [10386,] -6.178495e+07 -4.781715e+07 -5.099949e+09 -1.016826e+06
## [10387,] -3.312242e+11 -2.528331e+11 -3.053985e+13 -1.847101e+09
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## [10391,] -6.548526e+06 -5.722682e+06 -8.201393e+08 -5.747703e+04
## [10392,] -6.159698e+07 -5.826237e+07 -5.099949e+09 -9.480438e+05
## [10393,] -3.420387e+11 -2.622925e+11 -3.053985e+13 -1.629601e+09
## [10394,] -2.532949e+11 -2.209246e+11 -2.313410e+13 -1.218982e+09
## [10395,] -4.256280e+09 -3.488674e+09 -3.857787e+11 -2.537559e+07
## [10396,] -1.752039e+07 -1.331346e+07 -1.916054e+09 -1.638026e+04
## [10397,] -6.982314e+06 -5.959801e+06 -8.201393e+08 -5.794842e+04
## [10398,] -6.310881e+07 -5.466607e+07 -5.099949e+09 -9.457149e+05
## [10399,] -3.442225e+11 -2.917134e+11 -3.053985e+13 -1.599642e+09
## [10400,] -2.623560e+11 -1.914756e+11 -2.313410e+13 -1.202049e+09
## [10401,] -4.324837e+09 -3.366130e+09 -3.857787e+11 -2.495556e+07
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## [10416,] -1.220544e+08 -1.147633e+08 -3.313693e+11 -1.941694e+07
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```

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## [10491,] -4.487300e+09 -4.143589e+09 -2.524459e+13 -1.106928e+08
## [10492,] -9.042623e+05 -2.610269e+05 -1.253827e+11 -1.000868e+07
## [10493,] -3.772269e+05 -8.433562e+05 -5.366828e+10 -1.121681e+07
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```



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## [10509,] -4.487505e+09 -4.143786e+09 -2.526564e+13 -1.085333e+08
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## [10511,] -4.967201e+05 -6.765419e+05 -5.373543e+10 -1.122231e+07
## [10512,] -1.166366e+08 -1.150910e+08 -3.341481e+11 -1.876623e+07
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## [10514,] -2.525084e+11 -2.179122e+11 -1.516375e+15 -2.136140e+09
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## [10516,] -9.269578e+05 -3.392254e+05 -1.255919e+11 -1.014171e+07
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## [10522,] -8.249876e+05 -2.555899e+05 -1.257489e+11 -1.015157e+07
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## [10700,] -2.615204e+11 -2.255186e+11 -1.544934e+15 -2.316576e+09
## [10701,] -4.591170e+09 -4.014779e+09 -2.577359e+13 -9.410995e+07
## [10702,] -1.004437e+06 -2.995160e+05 -1.280101e+11 -1.025189e+07
## [10703,] -3.293645e+05 -6.550936e+05 -5.479290e+10 -1.159415e+07
## [10704,] -1.269523e+08 -1.082792e+08 -3.408644e+11 -2.020973e+07
## [10705,] -3.404178e+11 -2.589727e+11 -2.041187e+15 -3.098442e+09
## [10706,] -2.606891e+11 -2.178779e+11 -1.546848e+15 -2.095454e+09
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## [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
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## [10716,] -6.521751e+07 -4.948642e+07 -5.099949e+09 -9.480438e+05
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## [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
## [10728,] -5.954813e+07 -5.466607e+07 -5.099949e+09 -9.644259e+05
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## [10732,] -1.677293e+07 -1.677293e+07 -1.922521e+09 -1.471190e+04
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## [10738,] -1.683407e+07 -1.557342e+07 -1.922521e+09 -1.507591e+04
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## [10889,] -5.814627e+05 -6.991021e+05 -5.558707e+10 -1.162262e+07
## [10890,] -1.308025e+08 -1.038847e+08 -3.456623e+11 -2.009918e+07
## [10891,] -3.158344e+11 -2.685184e+11 -2.069918e+15 -3.480157e+09
## [10892,] -2.451626e+11 -1.957291e+11 -1.568616e+15 -2.521204e+09
## [10893,] -4.752308e+09 -3.757262e+09 -2.615787e+13 -1.163301e+08
## [10894,] -8.634034e+05 -1.975168e+05 -1.299719e+11 -1.057393e+07
## [10895,] -5.913165e+05 -7.016601e+05 -5.563262e+10 -1.154953e+07
## [10896,] -1.267633e+08 -1.164723e+08 -3.459456e+11 -2.024189e+07
## [10897,] -3.168811e+11 -2.782626e+11 -2.071614e+15 -2.982355e+09
## [10898,] -2.540776e+11 -2.254910e+11 -1.569258e+15 -2.619826e+09
## [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
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## [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
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## [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
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## [10935,] -4.725066e+09 -4.153531e+09 -2.631882e+13 -1.036240e+08
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## [10937,] -2.214716e+05 -7.196968e+05 -5.595202e+10 -1.156223e+07
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## [10940,] -2.598224e+11 -2.254801e+11 -1.578912e+15 -2.304884e+09
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## [10942,] -5.025535e+05 -6.494160e+05 -1.307715e+11 -1.062428e+07
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## [10945,] -3.458315e+11 -2.982629e+11 -2.084358e+15 -3.011713e+09
## [10946,] -2.532489e+11 -2.178423e+11 -1.578912e+15 -2.312679e+09
## [10947,] -4.682102e+09 -4.289634e+09 -2.632957e+13 -1.077281e+08
## [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
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## [10960,] -3.716906e+05 -3.362058e+05 -1.309317e+11 -1.067819e+07
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## [10963,] -3.253144e+11 -3.189667e+11 -2.087764e+15 -3.326061e+09
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## [10972,] -4.845596e+05 -5.269816e+05 -1.311455e+11 -1.045563e+07
## [10973,] -4.538906e+05 -7.314126e+05 -5.615783e+10 -1.165925e+07
## [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
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## [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
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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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## [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
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## [11006,] -2.540537e+11 -2.029503e+11 -1.589243e+15 -2.502491e+09
## [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
## [11009,] -4.433882e+05 -8.302151e+05 -5.636402e+10 -1.178360e+07
## [11010,] -1.275847e+08 -1.144263e+08 -3.504937e+11 -2.066873e+07
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## [11013,] -4.655272e+09 -4.021463e+09 -2.651262e+13 -1.097452e+08
## [11014,] -6.646278e+05 -7.334346e+04 -1.316807e+11 -1.071890e+07
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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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## [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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## [11035,] -3.327849e+11 -2.881535e+11 -2.101412e+15 -3.609964e+09
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## [11058,] -6.182100e+07 -5.469998e+07 -5.151682e+09 -1.038456e+06
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## [11065,] -3.541327e+11 -2.719234e+11 -3.084964e+13 -1.674874e+09
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## [11080,] -7.291141e+05 -2.385760e+05 -1.321096e+11 -1.079324e+07
## [11081,] -4.726128e+05 -8.427949e+05 -5.657059e+10 -1.196284e+07
## [11082,] -1.208041e+08 -1.171495e+08 -3.517782e+11 -2.036247e+07
## [11083,] -3.327796e+11 -2.782296e+11 -2.106541e+15 -3.487280e+09
## [11084,] -2.540460e+11 -2.254612e+11 -1.595716e+15 -2.202877e+09
## [11085,] -4.742413e+09 -3.621399e+09 -2.662059e+13 -1.002519e+08
## [11086,] -1.273057e+06 -4.045886e+05 -1.322169e+11 -1.069570e+07
## [11087,] -5.447239e+05 -1.137933e+06 -5.661654e+10 -1.212668e+07
## [11088,] -1.258880e+08 -1.120584e+08 -3.520640e+11 -2.098574e+07
## [11089,] -3.327779e+11 -2.684828e+11 -2.108253e+15 -3.498115e+09
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## [11091,] -4.009361e+09 -4.571212e+09 -2.664221e+13 -1.150435e+08
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## [11104,] -8.370244e+05 -3.101472e+05 -1.325392e+11 -1.084818e+07
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## [11109,] -4.902950e+09 -4.023014e+09 -2.668548e+13 -1.097821e+08
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## [11269,] -3.115813e+11 -3.084677e+11 -2.146939e+15 -3.181828e+09
## [11270,] -2.499380e+11 -2.029111e+11 -1.626318e+15 -2.409736e+09
## [11271,] -4.661113e+09 -4.026892e+09 -2.712009e+13 -1.077997e+08
## [11272,] -4.870308e+05 -2.770373e+05 -1.346978e+11 -1.084319e+07
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## [11278,] -4.964185e+05 -2.034011e+05 -1.347520e+11 -1.093190e+07
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## [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
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## [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
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## [11459,] -7.125062e+05 -9.632675e+05 -5.849340e+10 -1.220597e+07
## [11460,] -1.270109e+08 -1.058566e+08 -3.637350e+11 -2.146785e+07
## [11461,] -3.199287e+11 -3.074020e+11 -2.179012e+15 -3.084760e+09
## [11462,] -2.490986e+11 -2.028849e+11 -1.651272e+15 -2.479052e+09
## [11463,] -4.622285e+09 -4.439125e+09 -2.753622e+13 -1.132514e+08
## [11464,] -7.315172e+05 -4.179170e+05 -1.367646e+11 -1.126938e+07
## [11465,] -5.369913e+05 -8.722302e+05 -5.854013e+10 -1.238527e+07
## [11466,] -1.308500e+08 -1.108708e+08 -3.640256e+11 -2.128282e+07
## [11467,] -3.125885e+11 -2.981686e+11 -2.181623e+15 -3.231141e+09
## [11468,] -2.434614e+11 -1.956419e+11 -1.652591e+15 -2.511315e+09
## [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
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## [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
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## [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
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## [11554,] -6.660240e+05 -3.081079e+05 -1.379684e+11 -1.146319e+07
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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
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## [11649,] -5.004578e+09 -4.727171e+09 -2.803311e+13 -1.082478e+08
## [11650,] -8.152994e+05 -4.714998e+05 -1.392325e+11 -1.152167e+07
## [11651,] -1.025097e+06 -7.572545e+05 -5.959647e+10 -1.252757e+07
## [11652,] -1.208834e+08 -1.167099e+08 -3.705944e+11 -2.149018e+07
## [11653,] -3.402333e+11 -2.588118e+11 -2.219217e+15 -3.060200e+09
## [11654,] -2.646852e+11 -2.331344e+11 -1.681069e+15 -2.224060e+09
## [11655,] -4.541923e+09 -4.034946e+09 -2.803311e+13 -1.148801e+08
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## [11658,] -1.275512e+08 -1.167099e+08 -3.705944e+11 -2.160127e+07
## [11659,] -3.315908e+11 -2.781248e+11 -2.219217e+15 -3.291255e+09
## [11660,] -2.572266e+11 -1.956128e+11 -1.681069e+15 -2.664767e+09
## [11661,] -4.388067e+09 -4.034946e+09 -2.803311e+13 -1.166820e+08
## [11662,] -6.140476e+05 -2.142954e+05 -1.392325e+11 -1.155714e+07
## [11663,] -6.113679e+05 -1.356175e+06 -5.959647e+10 -1.257275e+07
## [11664,] -1.248626e+08 -1.167099e+08 -3.705944e+11 -2.129094e+07
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## [11670,] -1.278390e+08 -1.090982e+08 -3.707410e+11 -2.083663e+07
## [11671,] -3.369776e+11 -2.981311e+11 -2.220974e+15 -2.857282e+09
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## [11675,] -6.943058e+05 -1.039724e+06 -5.966723e+10 -1.262037e+07
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## [11683,] -3.198829e+11 -2.494105e+11 -2.225368e+15 -3.507969e+09
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## [11701,] -3.195263e+11 -3.121933e+11 -3.084964e+13 -1.705527e+09
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## [11706,] -5.702525e+07 -5.469998e+07 -5.151682e+09 -9.998011e+05
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## [11718,] -6.429147e+07 -4.951868e+07 -5.151682e+09 -1.031153e+06
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## [11722,] -1.725250e+07 -1.384621e+07 -1.935490e+09 -1.526864e+04
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## [11724,] -6.032476e+07 -4.951868e+07 -5.151682e+09 -9.926349e+05
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## [11823,] -4.419805e+09 -4.588380e+09 -2.846733e+13 -1.193763e+08
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```

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## [11838,] -1.307109e+08 -1.097376e+08 -3.766304e+11 -2.173698e+07
## [11839,] -3.230222e+11 -2.780902e+11 -2.257133e+15 -3.615929e+09
## [11840,] -2.498417e+11 -2.101965e+11 -1.709790e+15 -2.464300e+09
## [11841,] -4.588898e+09 -4.039218e+09 -2.852324e+13 -1.233809e+08
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## [11845,] -3.326245e+11 -2.880042e+11 -2.259790e+15 -3.394963e+09
## [11846,] -2.629824e+11 -1.955817e+11 -1.711803e+15 -2.152472e+09
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## [12029,] -7.954676e+05 -1.418817e+06 -6.195367e+10 -1.299796e+07
## [12030,] -1.287221e+08 -1.132002e+08 -3.852524e+11 -2.140393e+07
## [12031,] -3.355265e+11 -2.622902e+11 -3.084964e+13 -1.697838e+09
## [12032,] -2.682027e+11 -2.133628e+11 -2.336876e+13 -1.394660e+09
## [12033,] -4.134553e+09 -3.613684e+09 -3.896919e+11 -2.646460e+07
## [12034,] -1.725250e+07 -1.497852e+07 -1.935490e+09 -1.490230e+04
## [12035,] -6.713575e+06 -5.479638e+06 -8.284585e+08 -5.599843e+04
## [12036,] -6.125776e+07 -5.829737e+07 -5.151682e+09 -9.807485e+05
## [12037,] -3.409468e+11 -2.622902e+11 -3.084964e+13 -1.705527e+09
## [12038,] -2.348613e+11 -2.133628e+11 -2.336876e+13 -1.480771e+09
## [12039,] -4.394246e+09 -3.366396e+09 -3.896919e+11 -2.635703e+07
## [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
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## [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
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## [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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## [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
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## [12069,] -4.766544e+09 -4.044659e+09 -2.915320e+13 -1.153969e+08
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## [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
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## [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
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## [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
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## [12082,] -4.648076e+05 -5.489443e+04 -1.450205e+11 -1.194345e+07
## [12083,] -9.220791e+05 -1.429760e+06 -6.209800e+10 -1.297443e+07
## [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
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## [12089,] -7.702096e+05 -8.138649e+05 -6.212207e+10 -1.300116e+07
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## [12123,] -4.724547e+09 -4.316501e+09 -2.928909e+13 -1.095973e+08
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## [12161,] -1.045092e+06 -1.233435e+06 -6.250785e+10 -1.316768e+07
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## [12167,] -9.058616e+05 -1.846733e+06 -6.260448e+10 -1.323624e+07
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## [12201,] -4.655278e+09 -4.182341e+09 -2.955042e+13 -1.232981e+08
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## [12219,] -4.785447e+09 -4.319514e+09 -2.963018e+13 -1.131740e+08
## [12220,] -3.517289e+05 -1.256096e+05 -1.471647e+11 -1.220745e+07
## [12221,] -1.026273e+06 -1.267614e+06 -6.299175e+10 -1.336478e+07
## [12222,] -1.297412e+08 -1.164690e+08 -3.917075e+11 -2.240591e+07
## [12223,] -3.239963e+11 -2.780104e+11 -2.345649e+15 -3.110266e+09
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## [12227,] -7.497459e+05 -1.522288e+06 -6.299175e+10 -1.322169e+07
## [12228,] -1.316565e+08 -1.216920e+08 -3.917075e+11 -2.239458e+07
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## [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
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## [12258,] -1.269148e+08 -1.140473e+08 -3.930654e+11 -2.264156e+07
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## [12409,] -3.292897e+11 -2.878943e+11 -2.380076e+15 -3.096647e+09
## [12410,] -2.489270e+11 -2.101006e+11 -1.802920e+15 -2.280297e+09
```

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## [12411,] -4.935535e+09 -4.186889e+09 -3.007656e+13 -1.149283e+08
## [12412,] -5.620723e+05 -7.019935e+04 -1.493818e+11 -1.226463e+07
## [12413,] -9.682237e+05 -1.335608e+06 -6.394072e+10 -1.350052e+07
## [12414,] -1.312422e+08 -1.119904e+08 -3.976086e+11 -2.299777e+07
## [12415,] -3.082437e+11 -2.878935e+11 -2.380986e+15 -3.361304e+09
## [12416,] -2.408978e+11 -2.176019e+11 -1.803609e+15 -2.494189e+09
## [12417,] -4.688804e+09 -4.052633e+09 -3.008805e+13 -1.283298e+08
## [12418,] -1.708531e+05 -2.998506e+05 -1.494388e+11 -1.228044e+07
## [12419,] -8.572513e+05 -1.337375e+06 -6.396514e+10 -1.352778e+07
## [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
## [12426,] -1.299620e+08 -1.198010e+08 -3.983683e+11 -2.286245e+07
## [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
## [12434,] -2.385104e+11 -2.100957e+11 -1.807745e+15 -2.112554e+09
## [12435,] -4.617928e+09 -4.187482e+09 -3.014553e+13 -1.166035e+08
## [12436,] -5.890622e+05 -1.024186e+05 -1.497243e+11 -1.218196e+07
## [12437,] -9.483861e+05 -1.709407e+06 -6.408734e+10 -1.359205e+07
## [12438,] -1.213947e+08 -1.388574e+08 -3.985204e+11 -2.300731e+07
## [12439,] -3.576808e+11 -2.979767e+11 -2.386446e+15 -2.993204e+09
## [12440,] -2.481129e+11 -2.100957e+11 -1.807745e+15 -2.591897e+09
## [12441,] -4.575352e+09 -4.187482e+09 -3.014553e+13 -1.154760e+08
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## [12445,] -3.282148e+11 -3.082386e+11 -2.386446e+15 -3.085689e+09
## [12446,] -2.529852e+11 -2.100957e+11 -1.807745e+15 -2.518094e+09
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## [12448,] -1.732366e+05 -1.551126e+05 -1.497814e+11 -1.226553e+07
## [12449,] -9.308463e+05 -1.464322e+06 -6.411179e+10 -1.369191e+07
## [12450,] -1.222040e+08 -1.251316e+08 -3.986724e+11 -2.324484e+07
## [12451,] -3.455206e+11 -2.586641e+11 -2.389178e+15 -2.992953e+09
## [12452,] -2.562574e+11 -2.027232e+11 -1.809815e+15 -2.558732e+09
## [12453,] -4.921805e+09 -4.053411e+09 -3.018004e+13 -1.279943e+08
## [12454,] -4.455482e+05 -1.004716e+05 -1.499529e+11 -1.250212e+07
## [12455,] -9.178575e+05 -9.367536e+05 -6.420966e+10 -1.354791e+07
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## [12459,] -4.561823e+09 -4.188075e+09 -3.021458e+13 -1.146762e+08
## [12460,] -4.625598e+05 -2.498624e+04 -1.501245e+11 -1.238675e+07
## [12461,] -1.160608e+06 -1.139564e+06 -6.425862e+10 -1.362065e+07
## [12462,] -1.311957e+08 -1.225702e+08 -3.995854e+11 -2.277224e+07
## [12463,] -3.228910e+11 -2.979709e+11 -2.392824e+15 -3.726175e+09
## [12464,] -2.206303e+11 -2.175927e+11 -1.812576e+15 -2.501304e+09
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```

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## [12471,] -4.762117e+09 -4.188273e+09 -3.023761e+13 -1.199234e+08
## [12472,] -4.218782e+05 -1.509279e+05 -1.501817e+11 -1.223511e+07
## [12473,] -9.035067e+05 -1.360449e+06 -6.428310e+10 -1.361543e+07
## [12474,] -1.295909e+08 -1.122332e+08 -3.998900e+11 -2.223047e+07
## [12475,] -3.165655e+11 -2.878812e+11 -2.394647e+15 -3.168305e+09
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## [12479,] -9.064144e+05 -1.481013e+06 -6.433209e+10 -1.351827e+07
## [12480,] -1.309742e+08 -1.199851e+08 -4.000423e+11 -2.336902e+07
## [12481,] -3.228884e+11 -2.492655e+11 -2.395559e+15 -2.951720e+09
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## [12484,] -3.998200e+05 -7.727225e+03 -1.503534e+11 -1.243456e+07
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## [12497,] -1.195173e+06 -1.152653e+06 -6.445464e+10 -1.364768e+07
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## [12499,] -3.422307e+11 -2.878763e+11 -2.400123e+15 -3.424579e+09
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## [12510,] -1.297301e+08 -1.174938e+08 -4.011094e+11 -2.347871e+07
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## [12512,] -2.480992e+11 -2.100830e+11 -1.820181e+15 -2.309554e+09
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## [12514,] -3.837881e+05 -1.815800e+04 -1.507543e+11 -1.239867e+07
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## [12516,] -1.289309e+08 -1.227564e+08 -4.012619e+11 -2.295562e+07
## [12517,] -3.411384e+11 -2.979617e+11 -2.402863e+15 -3.032619e+09
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## [12523,] -3.207649e+11 -2.586509e+11 -2.404691e+15 -3.391488e+09
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## [12525,] -4.691525e+09 -3.922958e+09 -3.038755e+13 -1.201410e+08
## [12526,] -4.273754e+05 -5.227682e+04 -1.509837e+11 -1.252556e+07
```

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## [12533,] -9.458873e+05 -1.167467e+06 -6.467552e+10 -1.369491e+07
## [12534,] -1.298520e+08 -1.228580e+08 -4.021779e+11 -2.320663e+07
## [12535,] -3.324791e+11 -2.682144e+11 -2.408348e+15 -3.188029e+09
## [12536,] -2.400789e+11 -2.329780e+11 -1.825029e+15 -2.673173e+09
## [12537,] -4.649027e+09 -4.055552e+09 -3.043375e+13 -1.204377e+08
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## [12540,] -1.407421e+08 -1.255593e+08 -4.024834e+11 -2.373158e+07
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## [12553,] -3.389529e+11 -3.186475e+11 -2.414755e+15 -3.041797e+09
## [12554,] -2.456710e+11 -2.100739e+11 -1.829189e+15 -2.293036e+09
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## [12574,] -4.916492e+05 -2.424132e+05 -1.519029e+11 -1.249071e+07
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## [12580,] -3.741544e+05 -8.467668e+04 -1.519029e+11 -1.246437e+07
## [12581,] -9.286065e+05 -1.391210e+06 -6.501986e+10 -1.373054e+07
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```

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## [12592,] -3.427952e+05 -8.246776e+04 -1.521908e+11 -1.267124e+07
## [12593,] -1.013463e+06 -1.930316e+06 -6.514307e+10 -1.367166e+07
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## [12601,] -3.175841e+11 -2.878517e+11 -2.427595e+15 -3.123400e+09
## [12602,] -2.416564e+11 -2.026943e+11 -1.838915e+15 -2.323184e+09
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## [12607,] -3.465766e+11 -2.779354e+11 -2.430350e+15 -3.454417e+09
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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
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## [12622,] -3.998587e+05 -1.270218e+05 -1.525942e+11 -1.274128e+07
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## [12791,] -1.344666e+06 -1.277268e+06 -6.628200e+10 -1.387796e+07
## [12792,] -1.334808e+08 -1.239786e+08 -4.123222e+11 -2.382340e+07
## [12793,] -3.643160e+11 -2.492029e+11 -2.470948e+15 -3.494401e+09
## [12794,] -2.344965e+11 -2.488507e+11 -1.872458e+15 -2.335303e+09
## [12795,] -4.742212e+09 -3.929853e+09 -3.122466e+13 -1.105340e+08
## [12796,] -2.450993e+05 -3.041217e+04 -1.550841e+11 -1.306305e+07
## [12797,] -1.021263e+06 -1.516185e+06 -6.638150e+10 -1.408056e+07
## [12798,] -1.340875e+08 -1.161624e+08 -4.127864e+11 -2.420946e+07
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## [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
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## [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
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## [12813,] -4.431093e+09 -4.062855e+09 -3.130665e+13 -1.258910e+08
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## [12816,] -1.331576e+08 -1.215470e+08 -4.143353e+11 -2.357061e+07
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## [12831,] -4.418084e+09 -4.473915e+09 -3.141223e+13 -1.170465e+08
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## [12886,] -2.271024e+05 -4.972316e+04 -1.570671e+11 -1.309993e+07
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## [12888,] -1.347076e+08 -1.246261e+08 -4.182203e+11 -2.374480e+07
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## [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
## [12894,] -1.287006e+08 -1.273466e+08 -4.185318e+11 -2.426397e+07
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## [12981,] -4.835471e+09 -3.935603e+09 -3.193095e+13 -1.228259e+08
## [12982,] -1.758928e+05 -1.652452e+04 -1.585920e+11 -1.308718e+07
## [12983,] -1.168458e+06 -1.508292e+06 -6.788301e+10 -1.440812e+07
## [12984,] -1.323834e+08 -1.197575e+08 -4.221234e+11 -2.423672e+07
## [12985,] -3.312908e+11 -2.978483e+11 -2.528724e+15 -3.599770e+09
## [12986,] -2.368139e+11 -2.251196e+11 -1.915521e+15 -2.322975e+09
## [12987,] -4.938008e+09 -4.068117e+09 -3.194278e+13 -1.168847e+08
## [12988,] -2.735732e+05 -4.628317e+02 -1.586508e+11 -1.328773e+07
## [12989,] -1.202167e+06 -1.633149e+06 -6.790818e+10 -1.450346e+07
## [12990,] -1.371418e+08 -1.171859e+08 -4.224364e+11 -2.436977e+07
```

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## [12991,] -3.238215e+11 -2.778484e+11 -2.530599e+15 -3.229395e+09
## [12992,] -2.586082e+11 -2.251181e+11 -1.916942e+15 -2.268417e+09
## [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
## [13004,] -2.455710e+11 -2.099815e+11 -1.921917e+15 -2.409107e+09
## [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
## [13016,] -2.512287e+11 -2.328740e+11 -1.924051e+15 -2.432829e+09
## [13017,] -4.793276e+09 -3.806604e+09 -3.208502e+13 -1.253792e+08
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## [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
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## [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
## [13030,] -1.501261e+07 -1.797804e+07 -1.961556e+09 -2.378177e+04
## [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
## [13034,] -2.532895e+11 -2.364334e+11 -2.368349e+13 -1.358320e+09
## [13035,] -4.148418e+09 -3.870117e+09 -3.949402e+11 -2.758452e+07
## [13036,] -1.673540e+07 -1.673540e+07 -1.961556e+09 -1.315418e+04
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## [13038,] -6.037225e+07 -5.653031e+07 -5.221064e+09 -1.005923e+06
## [13039,] -3.366036e+11 -3.018619e+11 -3.126511e+13 -1.720704e+09
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## [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
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## [13063,] -3.420930e+11 -2.978357e+11 -2.542802e+15 -2.948646e+09
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## [13065,] -5.087836e+09 -4.341036e+09 -3.212062e+13 -1.233294e+08
## [13066,] -3.877368e+05 -2.113740e+04 -1.595930e+11 -1.320843e+07
## [13067,] -1.218274e+06 -1.793539e+06 -6.831150e+10 -1.426502e+07
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## [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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## [13114,] -1.553775e+05 -2.107115e+03 -1.605381e+11 -1.329745e+07
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## [13127,] -1.261530e+06 -1.455827e+06 -6.879198e+10 -1.455776e+07
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## [13153,] -2.957814e+11 -2.978124e+11 -2.569187e+15 -3.495934e+09
## [13154,] -2.447398e+11 -2.099556e+11 -1.948320e+15 -2.709798e+09
## [13155,] -5.031755e+09 -4.207384e+09 -3.250166e+13 -1.165300e+08
## [13156,] -2.595922e+05 -2.770378e+04 -1.614266e+11 -1.359482e+07
## [13157,] -1.282213e+06 -1.249099e+06 -6.909631e+10 -1.482360e+07
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```

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## [13171,] -3.475352e+11 -2.585086e+11 -2.574858e+15 -3.130744e+09
## [13172,] -2.602242e+11 -2.328467e+11 -1.950468e+15 -2.406108e+09
## [13173,] -4.553885e+09 -3.810093e+09 -3.252555e+13 -1.222814e+08
## [13174,] -7.212351e+04 -9.815990e+04 -1.616046e+11 -1.321297e+07
## [13175,] -1.084579e+06 -2.126992e+06 -6.917250e+10 -1.460783e+07
## [13176,] -1.310980e+08 -1.232717e+08 -4.302999e+11 -2.440438e+07
## [13177,] -2.957748e+11 -3.184974e+11 -2.576750e+15 -3.440329e+09
## [13178,] -2.660464e+11 -2.174501e+11 -1.953335e+15 -2.700803e+09
## [13179,] -4.725499e+09 -4.208078e+09 -3.258531e+13 -1.235265e+08
## [13180,] -2.393530e+05 -2.595194e+04 -1.618420e+11 -1.350243e+07
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## [13182,] -1.341827e+08 -1.180644e+08 -4.307740e+11 -2.404999e+07
## [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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## [13193,] -1.472767e+06 -1.878436e+06 -6.935044e+10 -1.473148e+07
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## [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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## [13225,] -3.080528e+11 -3.080528e+11 -2.590013e+15 -3.108556e+09
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## [13227,] -4.900930e+09 -3.941934e+09 -3.271698e+13 -1.209352e+08
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## [13362,] -6.157611e+07 -5.271763e+07 -2.546153e+09 -6.267155e+05
## [13363,] -3.081914e+11 -2.918570e+11 -1.524704e+13 -1.421689e+09
## [13364,] -2.517980e+11 -2.287430e+11 -1.154971e+13 -1.021725e+09
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## [13369,] -3.378466e+11 -3.020139e+11 -1.524704e+13 -1.324996e+09
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## [13371,] -4.171079e+09 -3.724089e+09 -1.926003e+11 -2.021644e+07
## [13372,] -1.865114e+07 -1.604372e+07 -9.565912e+08 -6.595562e+02
## [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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## [13552,] -2.086731e+05 -4.597980e+04 -1.678962e+11 -1.405320e+07
## [13553,] -1.325032e+06 -1.815300e+06 -7.186554e+10 -1.543118e+07
## [13554,] -1.370953e+08 -1.223808e+08 -4.468883e+11 -2.512385e+07
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## [13559,] -1.370593e+06 -2.089314e+06 -7.186554e+10 -1.525823e+07
## [13560,] -1.359767e+08 -1.171429e+08 -4.468883e+11 -2.541258e+07
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## [13577,] -1.414342e+06 -1.825610e+06 -7.199506e+10 -1.529960e+07
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## [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
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## [13741,] -3.364942e+11 -2.875934e+11 -2.725485e+15 -3.525352e+09
## [13742,] -2.390343e+11 -2.098436e+11 -2.064569e+15 -2.713961e+09
## [13743,] -4.741481e+09 -3.955475e+09 -3.442826e+13 -1.330313e+08
## [13744,] -7.218919e+04 -8.840859e+02 -1.709954e+11 -1.416668e+07
```



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## [13745,] -1.572130e+06 -2.203494e+06 -7.319214e+10 -1.553712e+07
## [13746,] -1.294660e+08 -1.232785e+08 -4.554626e+11 -2.618868e+07
## [13747,] -3.268314e+11 -2.698802e+11 -2.727431e+15 -3.470052e+09
## [13748,] -2.446165e+11 -2.173390e+11 -2.066781e+15 -2.331045e+09
## [13749,] -5.034468e+09 -4.223458e+09 -3.446515e+13 -1.203635e+08
## [13750,] -1.659116e+05 -2.394726e+05 -1.712397e+11 -1.450041e+07
## [13751,] -1.957676e+06 -1.667309e+06 -7.329670e+10 -1.563097e+07
## [13752,] -1.358406e+08 -1.209321e+08 -4.557878e+11 -2.615534e+07
## [13753,] -3.068963e+11 -3.079298e+11 -2.729378e+15 -2.773206e+09
## [13754,] -2.478359e+11 -2.249673e+11 -2.067518e+15 -2.253302e+09
## [13755,] -5.109115e+09 -4.223557e+09 -3.447744e+13 -1.187779e+08
## [13756,] -1.053146e+05 -3.335843e+04 -1.713008e+11 -1.420670e+07
## [13757,] -1.425378e+06 -2.214851e+06 -7.332285e+10 -1.564866e+07
## [13758,] -1.504577e+08 -1.206859e+08 -4.559504e+11 -2.752706e+07
## [13759,] -3.247010e+11 -2.875893e+11 -2.730352e+15 -3.670233e+09
## [13760,] -2.486427e+11 -1.811655e+11 -2.068994e+15 -2.322997e+09
## [13761,] -4.946177e+09 -4.088906e+09 -3.451436e+13 -1.271845e+08
## [13762,] -6.894173e+04 -1.283946e+03 -1.714842e+11 -1.426339e+07
## [13763,] -1.599884e+06 -2.370330e+06 -7.340133e+10 -1.570955e+07
## [13764,] -1.292980e+08 -1.455638e+08 -4.564384e+11 -2.648137e+07
## [13765,] -3.343272e+11 -2.875861e+11 -2.734249e+15 -3.075080e+09
## [13766,] -2.609221e+11 -1.952365e+11 -2.071946e+15 -2.730092e+09
## [13767,] -4.814886e+09 -3.956436e+09 -3.455129e+13 -1.244185e+08
## [13768,] -1.682605e+05 -1.395589e+03 -1.716065e+11 -1.420177e+07
## [13769,] -1.668453e+06 -1.681151e+06 -7.347986e+10 -1.552990e+07
## [13770,] -1.387703e+08 -1.261045e+08 -4.569267e+11 -2.596560e+07
## [13771,] -3.310999e+11 -2.776753e+11 -2.736199e+15 -3.189660e+09
## [13772,] -2.592658e+11 -2.024694e+11 -2.073423e+15 -2.330381e+09
## [13773,] -4.858879e+09 -3.956724e+09 -3.458824e+13 -1.277607e+08
## [13774,] -8.283682e+04 -1.176974e+03 -1.718512e+11 -1.464987e+07
## [13775,] -1.303936e+06 -2.697109e+06 -7.355842e+10 -1.588247e+07
## [13776,] -1.448275e+08 -1.208538e+08 -4.575782e+11 -2.688277e+07
## [13777,] -3.268201e+11 -2.875811e+11 -2.740100e+15 -3.468881e+09
## [13778,] -2.535124e+11 -2.249586e+11 -2.076379e+15 -2.687397e+09
## [13779,] -4.557601e+09 -4.361904e+09 -3.462521e+13 -1.459248e+08
## [13780,] -9.970487e+03 -1.151513e+04 -1.719736e+11 -1.414083e+07
## [13781,] -1.309176e+06 -2.868409e+06 -7.363703e+10 -1.588901e+07
## [13782,] -1.346799e+08 -1.262075e+08 -4.579041e+11 -2.567169e+07
## [13783,] -3.343193e+11 -3.079180e+11 -2.743027e+15 -3.033116e+09
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## [13786,] -6.884546e+04 -9.770440e+02 -1.720961e+11 -1.438333e+07
## [13787,] -1.851804e+06 -1.695050e+06 -7.366325e+10 -1.579356e+07
## [13788,] -1.386324e+08 -1.316772e+08 -4.582301e+11 -2.565081e+07
## [13789,] -2.996980e+11 -3.289513e+11 -2.744004e+15 -3.157469e+09
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## [13791,] -4.947467e+09 -4.225047e+09 -3.466219e+13 -1.187996e+08
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## [13796,] -2.422025e+11 -2.327162e+11 -2.079337e+15 -2.628535e+09
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## [13800,] -1.400992e+08 -1.262933e+08 -4.587194e+11 -2.703773e+07
## [13801,] -3.343157e+11 -2.976581e+11 -2.746934e+15 -3.136299e+09
## [13802,] -2.486305e+11 -2.249543e+11 -2.080816e+15 -2.329643e+09
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## [13804,] -3.109648e+05 -7.957991e+02 -1.723411e+11 -1.462246e+07
## [13805,] -1.528479e+06 -2.253686e+06 -7.376814e+10 -1.569713e+07
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## [13811,] -1.595518e+06 -2.115462e+06 -7.384686e+10 -1.582049e+07
## [13812,] -1.401535e+08 -1.236691e+08 -4.592089e+11 -2.551561e+07
## [13813,] -2.885734e+11 -2.976556e+11 -2.749865e+15 -3.241295e+09
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## [13815,] -4.758647e+09 -4.225743e+09 -3.474858e+13 -1.325244e+08
## [13816,] -1.355257e+05 -2.456899e+03 -1.725864e+11 -1.476597e+07
## [13817,] -1.523910e+06 -1.977312e+06 -7.387311e+10 -1.582267e+07
## [13818,] -1.320924e+08 -1.373703e+08 -4.595354e+11 -2.574919e+07
## [13819,] -3.539914e+11 -2.776616e+11 -2.752798e+15 -3.230431e+09
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## [13836,] -1.398042e+08 -1.186030e+08 -4.611696e+11 -2.563256e+07
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## [13849,] -3.674109e+11 -2.875582e+11 -2.767486e+15 -3.734751e+09
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## [13891,] -3.246601e+11 -2.875508e+11 -2.776318e+15 -3.609670e+09
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## [13904,] -2.366183e+11 -2.326889e+11 -2.106796e+15 -2.366357e+09
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## [13913,] -2.013450e+06 -2.055433e+06 -7.482121e+10 -1.601085e+07
## [13914,] -1.360370e+08 -1.242987e+08 -4.652678e+11 -2.599692e+07
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## [13916,] -2.413732e+11 -2.172969e+11 -2.110521e+15 -2.777000e+09
## [13917,] -4.805879e+09 -4.366548e+09 -3.519455e+13 -1.319535e+08
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```

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## [13932,] -1.330542e+08 -1.408963e+08 -4.659252e+11 -2.601589e+07
## [13933,] -3.418624e+11 -2.583346e+11 -2.791068e+15 -3.585934e+09
## [13934,] -2.469810e+11 -2.172934e+11 -2.114249e+15 -2.583459e+09
## [13935,] -4.577015e+09 -4.094772e+09 -3.525671e+13 -1.270383e+08
## [13936,] -1.179942e+05 -2.440033e+04 -1.751719e+11 -1.456623e+07
## [13937,] -1.530483e+06 -2.212123e+06 -7.497981e+10 -1.623678e+07
## [13938,] -1.325379e+08 -1.244009e+08 -4.662540e+11 -2.696777e+07
## [13939,] -3.058097e+11 -2.976189e+11 -2.793038e+15 -3.132278e+09
## [13940,] -2.534717e+11 -2.097953e+11 -2.115741e+15 -2.217922e+09
## [13941,] -4.806621e+09 -4.230016e+09 -3.528159e+13 -1.332820e+08
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## [13943,] -1.556762e+06 -1.932015e+06 -7.500626e+10 -1.593989e+07
## [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
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## [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
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## [14121,] -5.092203e+09 -3.967306e+09 -3.595670e+13 -1.318221e+08
## [14122,] -2.076581e+04 -9.873085e+03 -1.786492e+11 -1.491197e+07
## [14123,] -1.822844e+06 -2.498607e+06 -7.652163e+10 -1.646030e+07
## [14124,] -1.377413e+08 -1.200889e+08 -4.758417e+11 -2.722986e+07
## [14125,] -3.374645e+11 -2.775827e+11 -2.849466e+15 -2.952706e+09
## [14126,] -2.501715e+11 -1.873541e+11 -2.158486e+15 -2.259858e+09
## [14127,] -4.914851e+09 -3.733808e+09 -3.599440e+13 -1.208186e+08
## [14128,] -5.044821e+04 -4.020928e+04 -1.787740e+11 -1.501611e+07
## [14129,] -1.190033e+06 -2.988180e+06 -7.654835e+10 -1.658216e+07
## [14130,] -1.400157e+08 -1.308262e+08 -4.760079e+11 -2.627229e+07
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## [14134,] -9.722369e+04 -2.882568e+03 -1.789613e+11 -1.526611e+07
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## [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
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## [14139,] -5.645072e+09 -3.837310e+09 -3.605726e+13 -1.640003e+08
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## [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
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## [14146,] -1.125773e+05 -4.365071e+04 -1.794613e+11 -1.505238e+07
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## [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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## [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
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## [14156,] -2.534163e+11 -1.951481e+11 -2.169805e+15 -2.528530e+09
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## [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
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## [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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## [14311,] -3.287970e+11 -2.677943e+11 -2.918530e+15 -3.551977e+09
## [14312,] -2.493080e+11 -2.023435e+11 -2.210801e+15 -2.606551e+09
## [14313,] -4.393855e+09 -5.715550e+09 -3.686680e+13 -1.275922e+08
## [14314,] -4.987321e+04 -3.219648e+04 -1.831702e+11 -1.564520e+07
## [14315,] -1.983937e+06 -2.833316e+06 -7.840335e+10 -1.688509e+07
## [14316,] -1.427103e+08 -1.320527e+08 -4.877112e+11 -2.738417e+07
## [14317,] -3.245338e+11 -2.874320e+11 -2.920544e+15 -3.268837e+09
## [14318,] -2.517426e+11 -2.172008e+11 -2.212327e+15 -2.800374e+09
## [14319,] -4.576398e+09 -4.242848e+09 -3.690497e+13 -1.409828e+08
## [14320,] -1.953389e+04 -1.378115e+04 -1.832966e+11 -1.560422e+07
## [14321,] -1.962811e+06 -2.519911e+06 -7.848451e+10 -1.680726e+07
## [14322,] -1.493992e+08 -1.320878e+08 -4.880476e+11 -2.794150e+07
## [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
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## [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
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## [14335,] -3.202950e+11 -2.677880e+11 -2.926591e+15 -2.895943e+09
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## [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
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## [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
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## [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
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## [14351,] -2.461783e+06 -2.698113e+06 -7.870113e+10 -1.676088e+07
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## [14381,] -6.501680e+06 -6.156147e+06 -8.536679e+08 -6.392675e+04
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## [14395,] -3.431190e+11 -3.121856e+11 -3.178837e+13 -1.539837e+09
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## [14501,] -1.956864e+06 -2.655108e+06 -7.997981e+10 -1.706434e+07
## [14502,] -1.426256e+08 -1.196271e+08 -4.975159e+11 -2.828106e+07
## [14503,] -3.213049e+11 -2.974630e+11 -2.980274e+15 -3.425369e+09
## [14504,] -2.325423e+11 -2.171587e+11 -2.257573e+15 -2.727402e+09
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## [14506,] -1.184538e+04 -2.317487e+04 -1.871085e+11 -1.602820e+07
## [14507,] -1.856924e+06 -2.507311e+06 -8.008911e+10 -1.740744e+07
## [14508,] -1.364604e+08 -1.331262e+08 -4.980257e+11 -2.788682e+07
## [14509,] -3.234198e+11 -2.974614e+11 -2.982310e+15 -3.105737e+09
## [14510,] -2.420228e+11 -2.096623e+11 -2.259886e+15 -2.320001e+09
## [14511,] -4.870501e+09 -4.386466e+09 -3.768533e+13 -1.242270e+08
## [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
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## [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
## [14533,] -3.244755e+11 -2.774715e+11 -2.988420e+15 -3.567928e+09
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## [14541,] -4.485073e+09 -4.669169e+09 -3.781404e+13 -1.353688e+08
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## [14556,] -1.404812e+08 -1.280063e+08 -5.014310e+11 -2.816266e+07
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## [14570,] -2.270807e+11 -2.247673e+11 -2.276110e+15 -2.397230e+09
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## [14584,] -5.305650e+02 -6.084812e+04 -1.887725e+11 -1.608581e+07
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```



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## [14693,] -2.202541e+06 -3.007762e+06 -8.198627e+10 -1.780461e+07
## [14694,] -1.368538e+08 -1.261525e+08 -5.098230e+11 -2.819175e+07
## [14695,] -3.107655e+11 -2.974039e+11 -3.052955e+15 -3.048190e+09
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## [14698,] -4.847704e+04 -1.699930e+04 -1.915408e+11 -1.650765e+07
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## [14700,] -1.454005e+08 -1.261697e+08 -5.099949e+11 -2.804756e+07
## [14701,] -3.365991e+11 -2.817230e+11 -3.178837e+13 -1.569234e+09
## [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
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## [14721,] -4.339822e+09 -3.614511e+09 -4.015500e+11 -2.452618e+07
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## [14730,] -6.382691e+07 -5.304437e+07 -5.308444e+09 -9.472583e+05
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## [14737,] -3.254806e+11 -2.676875e+11 -3.056045e+15 -3.089238e+09
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## [14747,] -2.294431e+06 -3.202170e+06 -8.220767e+10 -1.769904e+07
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## [14754,] -1.421037e+08 -1.236317e+08 -5.113719e+11 -2.817583e+07
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## [14757,] -4.762555e+09 -4.256696e+09 -3.869506e+13 -1.279157e+08
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## [14881,] -3.318387e+11 -2.773693e+11 -3.119221e+15 -3.273201e+09
## [14882,] -2.930476e+11 -2.170626e+11 -2.362826e+15 -3.165002e+09
## [14883,] -4.739386e+09 -3.861964e+09 -3.940193e+13 -1.302804e+08
## [14884,] -8.340698e+02 -2.288244e+05 -1.957635e+11 -1.676682e+07
## [14885,] -2.458954e+06 -3.542203e+06 -8.379376e+10 -1.773532e+07
## [14886,] -1.431441e+08 -1.300025e+08 -5.212365e+11 -2.869138e+07
## [14887,] -3.222435e+11 -2.773677e+11 -3.121303e+15 -3.668187e+09
## [14888,] -2.573208e+11 -2.095685e+11 -2.364403e+15 -2.225170e+09
## [14889,] -4.797522e+09 -4.126813e+09 -3.944138e+13 -1.373552e+08
## [14890,] -4.861664e+03 -1.642723e+05 -1.958942e+11 -1.657832e+07
## [14891,] -2.297256e+06 -3.365555e+06 -8.384969e+10 -1.794300e+07
## [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
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## [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
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## [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
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## [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
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## [14999,] -2.525882e+06 -3.135789e+06 -8.511300e+10 -1.835720e+07
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## [15001,] -3.469975e+11 -2.773299e+11 -3.170436e+15 -3.607642e+09
## [15002,] -2.531855e+11 -2.021745e+11 -2.402417e+15 -2.229365e+09
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## [15015,] -4.802923e+09 -4.131822e+09 -4.011519e+13 -1.281253e+08
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## [15071,] -2.412540e+06 -3.181964e+06 -8.559271e+10 -1.862079e+07
## [15072,] -1.408691e+08 -1.230105e+08 -5.322492e+11 -2.920942e+07
## [15073,] -3.296377e+11 -2.972964e+11 -3.187250e+15 -3.037315e+09
## [15074,] -2.589204e+11 -2.095244e+11 -2.414358e+15 -2.528796e+09
## [15075,] -4.731922e+09 -3.999522e+09 -4.027456e+13 -1.309547e+08
## [15076,] -2.741964e+04 -1.435398e+05 -2.000323e+11 -1.728130e+07
## [15077,] -2.699670e+06 -3.364994e+06 -8.564923e+10 -1.850714e+07
## [15078,] -1.446227e+08 -1.284112e+08 -5.326007e+11 -2.925183e+07
```

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## [15079,] -3.339306e+11 -2.773154e+11 -3.189354e+15 -3.193188e+09
## [15080,] -2.714488e+11 -2.170142e+11 -2.416750e+15 -2.635730e+09
## [15081,] -4.775431e+09 -4.268869e+09 -4.030115e+13 -1.317094e+08
## [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
## [15100,] -6.775660e+00 -2.869378e+05 -2.006932e+11 -1.723945e+07
## [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
## [15105,] -4.661451e+09 -4.407747e+09 -4.043425e+13 -1.449335e+08
## [15106,] -5.599171e+03 -2.699617e+04 -2.008255e+11 -1.705446e+07
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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
## [15117,] -4.805889e+09 -4.270267e+09 -4.048755e+13 -1.290853e+08
## [15118,] -2.384790e+03 -2.537389e+05 -2.011564e+11 -1.712304e+07
## [15119,] -2.564258e+06 -3.781989e+06 -8.610210e+10 -1.852792e+07
## [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
## [15123,] -4.806206e+09 -4.001359e+09 -4.052754e+13 -1.339388e+08
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## [15125,] -2.680419e+06 -3.236721e+06 -8.615879e+10 -1.857490e+07
## [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
## [15128,] -2.630471e+11 -2.246239e+11 -2.431926e+15 -2.188582e+09
## [15129,] -5.312614e+09 -4.135162e+09 -4.056756e+13 -1.247085e+08
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## [15134,] -2.402621e+11 -2.246210e+11 -2.435127e+15 -2.700956e+09
## [15135,] -4.982684e+09 -4.409168e+09 -4.062095e+13 -1.411835e+08
## [15136,] -1.149926e+03 -3.001855e+05 -2.017528e+11 -1.719856e+07
```



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## [15137,] -2.446269e+06 -3.081360e+06 -8.635736e+10 -1.860833e+07
## [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
## [15141,] -4.778177e+09 -4.002229e+09 -4.064765e+13 -1.350694e+08
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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
## [15153,] -4.865816e+09 -3.871277e+09 -4.070109e+13 -1.453017e+08
## [15154,] -4.703438e+04 -3.225134e+04 -2.021508e+11 -1.729859e+07
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## [15156,] -1.415046e+08 -1.458073e+08 -5.384171e+11 -3.038976e+07
## [15157,] -3.349794e+11 -2.580054e+11 -3.224184e+15 -3.636605e+09
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## [15163,] -3.264026e+11 -2.772872e+11 -3.226301e+15 -4.171859e+09
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## [15166,] -1.632889e+03 -1.657623e+05 -2.024828e+11 -1.741120e+07
## [15167,] -2.426565e+06 -3.841664e+06 -8.666987e+10 -1.852857e+07
## [15168,] -1.493518e+08 -1.401390e+08 -5.389474e+11 -2.958919e+07
## [15169,] -3.393050e+11 -2.772856e+11 -3.228419e+15 -3.054600e+09
## [15170,] -2.394578e+11 -2.323662e+11 -2.445544e+15 -2.271627e+09
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## [15175,] -3.189889e+11 -2.972639e+11 -3.228419e+15 -3.064911e+09
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## [15189,] -4.382727e+09 -4.550600e+09 -4.079470e+13 -1.434182e+08
## [15190,] -1.761847e+04 -3.111694e+05 -2.026157e+11 -1.727485e+07
## [15191,] -2.733221e+06 -3.294718e+06 -8.675519e+10 -1.864563e+07
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## [15193,] -3.469444e+11 -2.579992e+11 -3.232657e+15 -3.602228e+09
## [15194,] -2.474594e+11 -2.323632e+11 -2.448754e+15 -2.294590e+09
```

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## [15197,] -3.290780e+06 -2.324438e+06 -8.689750e+10 -1.844614e+07
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## [15199,] -3.274596e+11 -2.675508e+11 -3.236897e+15 -2.961920e+09
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## [15203,] -2.871205e+06 -2.805089e+06 -8.701142e+10 -1.895199e+07
## [15204,] -1.492835e+08 -1.403562e+08 -5.410714e+11 -2.946776e+07
## [15205,] -3.382104e+11 -2.871789e+11 -3.240079e+15 -3.012608e+09
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## [15208,] -1.497699e+03 -7.137032e+04 -2.032808e+11 -1.755649e+07
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## [15210,] -1.455063e+08 -1.292438e+08 -5.410714e+11 -2.958480e+07
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## [15216,] -1.463736e+08 -1.238595e+08 -5.410714e+11 -2.964992e+07
## [15217,] -3.232043e+11 -3.075043e+11 -3.240079e+15 -3.074307e+09
## [15218,] -2.261440e+11 -2.246036e+11 -2.454377e+15 -2.380349e+09
## [15219,] -5.134168e+09 -4.411604e+09 -4.094201e+13 -1.261254e+08
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## [15221,] -2.568910e+06 -3.148792e+06 -8.706841e+10 -1.887142e+07
## [15222,] -1.452730e+08 -1.320316e+08 -5.416030e+11 -3.021183e+07
## [15223,] -3.095716e+11 -2.579906e+11 -3.244324e+15 -3.316259e+09
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## [15229,] -3.263860e+11 -2.675436e+11 -3.246448e+15 -3.220181e+09
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## [15234,] -1.544288e+08 -1.433339e+08 -5.423122e+11 -2.939596e+07
## [15235,] -3.613514e+11 -2.972489e+11 -3.247510e+15 -2.810897e+09
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## [15243,] -4.767305e+09 -4.274863e+09 -4.110301e+13 -1.405942e+08
## [15244,] -2.625514e+02 -3.310859e+05 -2.041470e+11 -1.732799e+07
## [15245,] -3.074603e+06 -3.006172e+06 -8.738220e+10 -1.890184e+07
## [15246,] -1.437305e+08 -1.349735e+08 -5.433770e+11 -3.029589e+07
## [15247,] -3.074924e+11 -2.871674e+11 -3.254949e+15 -3.251295e+09
## [15248,] -2.498704e+11 -2.169708e+11 -2.465641e+15 -2.300828e+09
## [15249,] -4.724254e+09 -4.005710e+09 -4.112988e+13 -1.318359e+08
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```

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## [15255,] -4.753284e+09 -4.840270e+09 -4.115675e+13 -1.426599e+08
## [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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## [15263,] -2.809545e+06 -3.748774e+06 -8.761076e+10 -1.897212e+07
## [15264,] -1.549926e+08 -1.351155e+08 -5.447983e+11 -3.069381e+07
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## [15267,] -4.724885e+09 -4.139881e+09 -4.121052e+13 -1.419837e+08
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## [15270,] -1.447580e+08 -1.351333e+08 -5.449761e+11 -3.023989e+07
## [15271,] -3.023376e+11 -2.675294e+11 -3.265591e+15 -3.250423e+09
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## [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
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## [15453,] -5.127712e+09 -4.559781e+09 -4.199418e+13 -1.281777e+08
## [15454,] -1.563429e+05 -1.077688e+05 -2.086406e+11 -1.757504e+07
## [15455,] -2.701177e+06 -3.736357e+06 -8.933449e+10 -1.934341e+07
## [15456,] -1.502126e+08 -1.334049e+08 -5.555171e+11 -3.065821e+07
## [15457,] -3.157594e+11 -3.178577e+11 -3.326584e+15 -2.944814e+09
## [15458,] -2.547082e+11 -2.401834e+11 -2.519905e+15 -2.158127e+09
## [15459,] -4.731295e+09 -4.702542e+09 -4.203492e+13 -1.294175e+08
## [15460,] -8.312720e+03 -6.514343e+04 -2.087755e+11 -1.788940e+07
## [15461,] -2.784956e+06 -4.128395e+06 -8.936337e+10 -1.923377e+07
## [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
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## [15471,] -4.434164e+09 -4.420236e+09 -4.208926e+13 -1.631054e+08
## [15472,] -5.960301e+04 -1.666345e+05 -2.091130e+11 -1.806092e+07
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## [15479,] -3.111695e+06 -3.958766e+06 -8.962342e+10 -1.932863e+07
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## [15483,] -4.761296e+09 -4.282860e+09 -4.218445e+13 -1.417983e+08
## [15484,] -1.002392e+05 -1.149069e+05 -2.095858e+11 -1.744611e+07
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## [15487,] -3.210061e+11 -2.674733e+11 -3.341651e+15 -3.254866e+09
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## [15491,] -2.842430e+06 -4.381190e+06 -8.982594e+10 -1.954450e+07
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## [15498,] -1.502939e+08 -1.337582e+08 -5.591133e+11 -3.029845e+07
## [15499,] -3.241770e+11 -2.579153e+11 -3.348119e+15 -3.034870e+09
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## [15642,] -1.479625e+08 -1.376678e+08 -5.705170e+11 -3.095045e+07
## [15643,] -3.612072e+11 -2.674188e+11 -3.416407e+15 -4.058847e+09
## [15644,] -2.123547e+11 -2.481369e+11 -2.587946e+15 -2.344511e+09
## [15645,] -4.899772e+09 -3.759070e+09 -4.315598e+13 -1.325286e+08
## [15646,] -9.636785e+04 -2.933587e+05 -2.143435e+11 -1.860951e+07
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## [15648,] -1.430549e+08 -1.404902e+08 -5.705170e+11 -3.096377e+07
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## [15650,] -2.513785e+11 -2.093734e+11 -2.589597e+15 -2.336514e+09
## [15651,] -4.856232e+09 -4.073693e+09 -4.319727e+13 -1.411516e+08
## [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
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## [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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## [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
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## [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
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## [15681,] -4.872217e+09 -4.291566e+09 -4.337644e+13 -1.294544e+08
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## [15694,] -1.705930e+07 -1.378372e+07 -2.007593e+09 -1.495159e+04
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## [15731,] -3.169600e+06 -4.243458e+06 -9.230338e+10 -2.022878e+07
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## [15832,] -3.753418e+04 -3.469236e+05 -2.186022e+11 -1.860645e+07
```

```
## [15833,] -3.114877e+06 -3.981910e+06 -9.359905e+10 -2.051012e+07
## [15834,] -1.511889e+08 -1.304699e+08 -5.820358e+11 -3.191963e+07
## [15835,] -3.467338e+11 -2.673690e+11 -3.485385e+15 -2.892479e+09
## [15836,] -2.562354e+11 -2.321909e+11 -2.640197e+15 -2.177954e+09
## [15837,] -4.994884e+09 -4.296273e+09 -4.402731e+13 -1.348520e+08
## [15838,] -1.232807e+05 -2.654177e+05 -2.186712e+11 -1.893619e+07
## [15839,] -3.045996e+06 -3.599964e+06 -9.359905e+10 -2.053679e+07
## [15840,] -1.479692e+08 -1.387998e+08 -5.820358e+11 -3.152872e+07
## [15841,] -3.031917e+11 -3.283248e+11 -3.486485e+15 -3.514094e+09
## [15842,] -2.521442e+11 -2.019725e+11 -2.641865e+15 -2.655758e+09
## [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
## [15846,] -1.506759e+08 -1.305397e+08 -5.827711e+11 -3.245671e+07
## [15847,] -3.304609e+11 -2.578137e+11 -3.490889e+15 -2.993179e+09
## [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
## [15850,] -5.144160e+04 -1.975168e+05 -2.190165e+11 -1.860740e+07
## [15851,] -3.233367e+06 -3.997172e+06 -9.374686e+10 -2.023021e+07
## [15852,] -1.504385e+08 -1.361193e+08 -5.833228e+11 -3.161572e+07
## [15853,] -3.083402e+11 -2.970598e+11 -3.493092e+15 -3.168881e+09
## [15854,] -2.529556e+11 -2.093258e+11 -2.646035e+15 -2.223113e+09
## [15855,] -4.966094e+09 -4.296974e+09 -4.412466e+13 -1.551330e+08
## [15856,] -3.994007e+04 -1.988775e+05 -2.191547e+11 -1.846643e+07
## [15857,] -3.348474e+06 -4.408743e+06 -9.383560e+10 -2.021994e+07
## [15858,] -1.525192e+08 -1.361371e+08 -5.835068e+11 -3.209713e+07
## [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
## [15861,] -4.966309e+09 -4.027115e+09 -4.415249e+13 -1.377006e+08
## [15862,] -1.562462e+05 -5.006451e+04 -2.192929e+11 -1.795120e+07
## [15863,] -3.226720e+06 -2.752102e+06 -9.386519e+10 -2.039927e+07
## [15864,] -1.470107e+08 -1.334120e+08 -5.840589e+11 -3.170399e+07
## [15865,] -3.187740e+11 -2.770853e+11 -3.497500e+15 -3.105896e+09
## [15866,] -2.989324e+11 -1.947412e+11 -2.649374e+15 -3.384770e+09
## [15867,] -5.403548e+09 -4.161246e+09 -4.418034e+13 -1.712508e+08
## [15868,] -4.117104e+04 -4.525942e+05 -2.194312e+11 -1.894444e+07
## [15869,] -3.252632e+06 -4.018589e+06 -9.395399e+10 -2.040669e+07
## [15870,] -1.511577e+08 -1.334650e+08 -5.846112e+11 -3.148761e+07
## [15871,] -3.358323e+11 -2.484292e+11 -3.500807e+15 -2.972068e+09
## [15872,] -2.611755e+11 -2.244291e+11 -2.651880e+15 -2.139272e+09
## [15873,] -4.748129e+09 -4.436101e+09 -4.423605e+13 -1.490880e+08
## [15874,] -7.870241e+04 -3.614755e+05 -2.197079e+11 -1.877665e+07
## [15875,] -3.350096e+06 -3.458713e+06 -9.404283e+10 -2.041410e+07
## [15876,] -1.535398e+08 -1.390700e+08 -5.847954e+11 -3.301847e+07
## [15877,] -3.293815e+11 -2.770820e+11 -3.501910e+15 -3.840514e+09
## [15878,] -2.456593e+11 -2.019636e+11 -2.652715e+15 -2.323077e+09
## [15879,] -4.952214e+09 -3.895944e+09 -4.423605e+13 -1.473042e+08
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## [15881,] -2.955038e+06 -3.284185e+06 -9.410207e+10 -2.067254e+07
## [15882,] -1.468318e+08 -1.307668e+08 -5.851638e+11 -3.199886e+07
## [15883,] -3.379935e+11 -2.578043e+11 -3.504116e+15 -2.941412e+09
## [15884,] -2.513187e+11 -2.321783e+11 -2.654386e+15 -2.176741e+09
## [15885,] -4.952429e+09 -4.576824e+09 -4.426392e+13 -1.308090e+08
## [15886,] -3.708551e+04 -3.633155e+05 -2.198464e+11 -1.914719e+07
## [15887,] -3.464399e+06 -4.437671e+06 -9.410207e+10 -2.035702e+07
## [15888,] -1.479941e+08 -1.419431e+08 -5.851638e+11 -3.189065e+07
## [15889,] -3.566661e+11 -3.072967e+11 -3.505220e+15 -2.941329e+09
## [15890,] -2.313965e+11 -2.244262e+11 -2.655222e+15 -2.299458e+09
```

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## [15891,] -4.676596e+09 -5.011637e+09 -4.427786e+13 -1.334734e+08
## [15892,] -1.173023e+05 -1.442355e+05 -2.199156e+11 -1.908214e+07
## [15893,] -3.358493e+06 -4.440891e+06 -9.413171e+10 -2.059035e+07
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## [15896,] -2.392657e+11 -2.168056e+11 -2.656058e+15 -2.604505e+09
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## [15898,] -1.127620e+05 -9.361719e+04 -2.199848e+11 -1.881609e+07
## [15899,] -3.274720e+06 -4.043136e+06 -9.419098e+10 -2.056416e+07
## [15900,] -1.536345e+08 -1.308192e+08 -5.857167e+11 -3.174102e+07
## [15901,] -3.304477e+11 -2.770780e+11 -3.507427e+15 -3.136368e+09
## [15902,] -2.361012e+11 -2.019601e+11 -2.656894e+15 -2.401555e+09
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## [15904,] -1.188778e+05 -3.670095e+05 -2.201233e+11 -1.910869e+07
## [15905,] -3.189275e+06 -3.851255e+06 -9.422063e+10 -2.038018e+07
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## [15908,] -2.424459e+11 -2.019567e+11 -2.661077e+15 -2.108591e+09
## [15909,] -5.131656e+09 -4.162627e+09 -4.437549e+13 -1.340814e+08
## [15910,] -1.370603e+05 -2.854661e+05 -2.204005e+11 -1.904419e+07
## [15911,] -3.490048e+06 -3.675750e+06 -9.436893e+10 -2.061022e+07
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## [15913,] -3.261695e+11 -2.770724e+11 -3.515158e+15 -3.567186e+09
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## [15915,] -4.821903e+09 -3.897184e+09 -4.441736e+13 -1.380415e+08
## [15916,] -2.386112e+02 -5.792506e+05 -2.206778e+11 -1.874657e+07
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## [15927,] -4.866142e+09 -3.768071e+09 -4.448719e+13 -1.366591e+08
## [15928,] -9.561029e+04 -3.782037e+05 -2.209553e+11 -1.901944e+07
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## [15939,] -5.314848e+09 -4.030122e+09 -4.458505e+13 -1.544583e+08
## [15940,] -1.961336e+05 -2.234466e+05 -2.215803e+11 -1.929508e+07
## [15941,] -2.625656e+06 -4.518521e+06 -9.484426e+10 -2.015804e+07
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## [15946,] -4.170610e+04 -4.850278e+05 -2.215803e+11 -1.932785e+07
## [15947,] -3.282302e+06 -3.722780e+06 -9.484426e+10 -2.078843e+07
## [15948,] -1.444232e+08 -1.284944e+08 -5.899640e+11 -3.250996e+07
```

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## [15950,] -2.440311e+11 -2.244066e+11 -2.677839e+15 -2.544866e+09
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## [15953,] -3.137791e+06 -4.746123e+06 -9.499305e+10 -2.084567e+07
## [15954,] -1.532751e+08 -1.396654e+08 -5.908894e+11 -3.245803e+07
## [15955,] -3.093412e+11 -2.770555e+11 -3.538402e+15 -3.745571e+09
## [15956,] -2.456336e+11 -2.092964e+11 -2.681198e+15 -3.032406e+09
## [15957,] -4.985603e+09 -4.868061e+09 -4.473905e+13 -1.311641e+08
## [15958,] -1.586475e+05 -3.079383e+05 -2.222758e+11 -1.871794e+07
## [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
## [15962,] -2.603174e+11 -1.947135e+11 -2.683719e+15 -2.511699e+09
## [15963,] -4.708940e+09 -4.031384e+09 -4.476707e+13 -1.407167e+08
## [15964,] -6.245697e+04 -4.968063e+05 -2.223454e+11 -1.908775e+07
## [15965,] -3.070210e+06 -4.148293e+06 -9.520154e+10 -2.090800e+07
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## [15970,] -5.363941e+03 -2.336748e+05 -2.225543e+11 -1.950100e+07
## [15971,] -3.840705e+06 -4.356912e+06 -9.526116e+10 -2.068926e+07
## [15972,] -1.484656e+08 -1.342429e+08 -5.927423e+11 -3.213685e+07
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## [15976,] -4.154397e+04 -4.049775e+05 -2.229026e+11 -1.914773e+07
## [15977,] -3.284351e+06 -3.781989e+06 -9.544011e+10 -2.090110e+07
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## [15980,] -2.529134e+11 -2.019313e+11 -2.692129e+15 -2.559946e+09
## [15981,] -5.363191e+09 -4.440886e+09 -4.489331e+13 -1.306380e+08
## [15982,] -1.471286e+05 -3.164773e+05 -2.229724e+11 -1.938358e+07
## [15983,] -2.955196e+06 -3.781989e+06 -9.544011e+10 -2.079358e+07
## [15984,] -1.580207e+08 -1.427636e+08 -5.934842e+11 -3.196821e+07
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## [15988,] -1.209735e+05 -4.079004e+05 -2.231118e+11 -1.946279e+07
## [15989,] -3.183982e+06 -3.787935e+06 -9.549979e+10 -2.098244e+07
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## [15995,] -3.415646e+06 -5.020323e+06 -9.549979e+10 -2.109945e+07
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## [15997,] -3.379509e+11 -2.869398e+11 -3.557275e+15 -2.957674e+09
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## [15999,] -4.942972e+09 -4.059275e+09 -4.494947e+13 -1.444533e+08
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## [16001,] -3.385097e+06 -3.793886e+06 -9.555950e+10 -2.049148e+07
## [16002,] -1.533194e+08 -1.371733e+08 -5.942267e+11 -3.271069e+07
## [16003,] -3.240082e+11 -2.970089e+11 -3.560611e+15 -3.975275e+09
## [16004,] -2.537253e+11 -2.019272e+11 -2.697181e+15 -2.303576e+09
## [16005,] -4.840702e+09 -4.166868e+09 -4.497756e+13 -1.475252e+08
## [16006,] -1.939199e+05 -1.179312e+05 -2.233908e+11 -1.908364e+07
```

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## [16009,] -3.250683e+11 -2.673137e+11 -3.562836e+15 -3.344201e+09
## [16010,] -2.553608e+11 -2.321393e+11 -2.698867e+15 -2.617102e+09
## [16011,] -4.987654e+09 -3.518816e+09 -4.500566e+13 -1.532096e+08
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## [16022,] -2.348524e+11 -2.364275e+11 -2.431926e+13 -1.218182e+09
## [16023,] -4.055356e+09 -3.741737e+09 -4.055422e+11 -2.570302e+07
## [16024,] -1.668542e+07 -1.377805e+07 -2.014213e+09 -1.923773e+04
## [16025,] -5.927833e+06 -5.903969e+06 -8.621551e+08 -6.236687e+04
## [16026,] -5.626266e+07 -6.028133e+07 -5.361220e+09 -9.894491e+05
## [16027,] -3.174121e+11 -3.121830e+11 -3.210441e+13 -1.591281e+09
## [16028,] -2.427803e+11 -2.286048e+11 -2.431926e+13 -1.195638e+09
## [16029,] -4.465126e+09 -3.247082e+09 -4.055422e+11 -2.486102e+07
## [16030,] -1.761186e+07 -1.269297e+07 -2.014213e+09 -2.028593e+04
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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
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## [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
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## [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
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## [16060,] -1.248525e+05 -4.246622e+05 -2.242988e+11 -1.959738e+07
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## [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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## [16070,] -2.352683e+11 -2.092741e+11 -2.708145e+15 -2.326036e+09
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## [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
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## [16080,] -1.566795e+08 -1.403526e+08 -5.979458e+11 -3.334020e+07
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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
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## [16092,] -1.527024e+08 -1.377108e+08 -5.998097e+11 -3.317990e+07
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## [16137,] -4.948131e+09 -4.307700e+09 -4.562613e+13 -1.499142e+08
## [16138,] -8.792695e+04 -4.581632e+05 -2.266121e+11 -1.952357e+07
## [16139,] -3.110670e+06 -4.337156e+06 -9.699804e+10 -2.134752e+07
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## [16175,] -3.475388e+06 -5.248868e+06 -9.747994e+10 -2.139252e+07
## [16176,] -1.527719e+08 -1.327667e+08 -6.063563e+11 -3.213163e+07
## [16177,] -3.113465e+11 -2.672647e+11 -3.632146e+15 -3.189640e+09
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```

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## [16197,] -4.906410e+09 -4.039442e+09 -4.593796e+13 -1.454893e+08
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## [16212,] -1.477350e+08 -1.442649e+08 -6.087969e+11 -3.303739e+07
## [16213,] -3.292684e+11 -2.969456e+11 -3.645638e+15 -3.073874e+09
## [16214,] -2.569449e+11 -2.018743e+11 -2.762442e+15 -2.160077e+09
## [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
## [16217,] -3.463262e+06 -4.232132e+06 -9.793281e+10 -2.123563e+07
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## [16226,] -2.367920e+11 -2.167110e+11 -2.768413e+15 -2.266419e+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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## [16402,] -2.335566e+05 -4.585771e+05 -2.335517e+11 -2.019765e+07
## [16403,] -4.024658e+06 -4.872135e+06 -9.99898e+10 -2.191888e+07
## [16404,] -1.516605e+08 -1.426614e+08 -6.218331e+11 -3.409198e+07
## [16405,] -3.334988e+11 -2.576515e+11 -3.724839e+15 -2.113781e+09
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## [16407,] -4.754980e+09 -4.181580e+09 -4.709520e+13 -1.544382e+08
## [16408,] -9.958228e+04 -5.709063e+05 -2.339085e+11 -2.055533e+07
## [16409,] -2.709925e+06 -3.128756e+06 -1.001212e+11 -2.180525e+07
## [16410,] -1.421631e+08 -1.456080e+08 -6.225930e+11 -3.355686e+07
## [16411,] -2.979014e+11 -3.175450e+11 -3.728252e+15 -3.129949e+09
## [16412,] -2.610170e+11 -2.166648e+11 -2.824171e+15 -2.842657e+09
```

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## [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
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## [16425,] -4.915835e+09 -4.047994e+09 -4.719589e+13 -1.522378e+08
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## [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
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## [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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## [16453,] -3.040217e+11 -3.388841e+11 -3.748765e+15 -3.340399e+09
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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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## [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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## [16591,] -3.206400e+11 -2.867548e+11 -3.812944e+15 -3.454923e+09
## [16592,] -2.535529e+11 -1.945517e+11 -2.889197e+15 -2.302718e+09
## [16593,] -4.923231e+09 -4.464444e+09 -4.819410e+13 -1.386194e+08
## [16594,] -2.891359e+05 -5.462364e+05 -2.393665e+11 -2.097586e+07
## [16595,] -4.192923e+06 -4.093072e+06 -1.024574e+11 -2.224906e+07
## [16596,] -1.558473e+08 -1.328618e+08 -6.371204e+11 -3.444343e+07
## [16597,] -3.270024e+11 -2.768585e+11 -3.815246e+15 -3.061262e+09
## [16598,] -2.486736e+11 -2.017720e+11 -2.890941e+15 -2.517559e+09
## [16599,] -4.591314e+09 -4.189193e+09 -4.820864e+13 -1.684304e+08
## [16600,] -1.297818e+05 -3.498100e+05 -2.395109e+11 -2.052098e+07
## [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
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## [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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## [16613,] -4.107245e+06 -5.409744e+06 -1.027977e+11 -2.243519e+07
## [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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## [16627,] -3.312623e+11 -2.575747e+11 -3.838306e+15 -3.028719e+09
## [16628,] -2.454336e+11 -2.017589e+11 -2.907536e+15 -2.224012e+09
## [16629,] -4.954802e+09 -3.924423e+09 -4.848539e+13 -1.419566e+08
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## [16633,] -3.280482e+11 -2.671185e+11 -3.842926e+15 -3.226414e+09
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## [16647,] -4.867428e+09 -4.191666e+09 -4.857295e+13 -1.496495e+08
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## [16651,] -3.409783e+11 -2.768335e+11 -3.851018e+15 -2.916021e+09
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## [16653,] -4.926556e+09 -4.192161e+09 -4.864598e+13 -1.406634e+08
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##
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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
## [7,] -1.356944e+09 -5.181800e+08
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## [9,] -1.775624e+07 -8.200492e+06
## [10,] -1.920848e+03 -6.410297e+03
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## [12,] -5.278029e+05 -3.071213e+05
## [13,] -1.262192e+09 -4.602822e+08
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## [15,] -1.754378e+07 -6.966973e+06
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## [22,] -5.515100e+02 -7.064164e+03
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## [24,] -6.397694e+05 -3.401981e+05
## [25,] -1.713174e+09 -5.697279e+08
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## [39,] -2.173399e+07 -8.675867e+06
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## [65,] -3.399558e+04 -7.650910e+04
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## [76,] -1.180020e+04 -5.647245e+04
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## [78,] -8.418944e+05 -5.324273e+05
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## [81,] -2.163887e+07 -9.562112e+06
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## [88,] -1.563331e+04 -5.825859e+04
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## [90,] -8.863861e+05 -5.625285e+05
## [91,] -2.621797e+09 -9.712917e+08
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## [96,] -7.920154e+06 -6.313779e+06
## [97,] -2.659955e+09 -8.749545e+08
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## [99,] -6.656281e+07 -3.404795e+07
## [100,] -2.778104e+06 -3.371120e+06
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## [105,] -6.810873e+07 -3.603030e+07
## [106,] -2.810518e+06 -3.379341e+06
## [107,] -3.326970e+06 -3.717186e+06
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## [112,] -2.803083e+06 -3.384894e+06
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## [115,] -2.640527e+09 -9.885573e+08
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## [117,] -6.934883e+07 -3.554768e+07
## [118,] -2.825665e+06 -3.398697e+06
## [119,] -3.341509e+06 -3.761041e+06
## [120,] -8.048070e+06 -6.470589e+06
## [121,] -2.592853e+09 -9.652537e+08
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## [126,] -7.725472e+06 -6.373550e+06
## [127,] -2.865342e+09 -1.047983e+09
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## [132,] -7.793988e+06 -6.466189e+06
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## [164,] -1.996941e+09 -7.161118e+08
## [165,] -6.911493e+07 -3.562973e+07
## [166,] -2.818764e+06 -3.437984e+06
## [167,] -3.321051e+06 -3.756430e+06
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## [170,] -2.077415e+09 -6.733158e+08
## [171,] -6.861915e+07 -3.465514e+07
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## [1193,] -3.888360e+06 -4.321568e+06
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## [1832,] -2.006145e+09 -7.259926e+08
## [1833,] -7.019328e+07 -3.615299e+07
```

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## [1835,] -4.152689e+06 -4.610525e+06
## [1836,] -9.192318e+06 -7.638790e+06
## [1837,] -3.273620e+09 -1.045310e+09
## [1838,] -1.835475e+09 -6.914033e+08
## [1839,] -6.985573e+07 -3.466740e+07
## [1840,] -3.640370e+06 -4.305768e+06
## [1841,] -4.191885e+06 -4.609593e+06
## [1842,] -9.066772e+06 -7.623178e+06
## [1843,] -2.531903e+09 -9.282071e+08
## [1844,] -2.385844e+09 -8.206475e+08
## [1845,] -6.864907e+07 -3.629738e+07
## [1846,] -3.674672e+06 -4.312036e+06
## [1847,] -4.221179e+06 -4.714579e+06
## [1848,] -9.126519e+06 -7.671340e+06
## [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
## [1853,] -4.247659e+06 -4.689294e+06
## [1854,] -9.181830e+06 -7.635842e+06
## [1855,] -2.503614e+09 -8.887435e+08
## [1856,] -2.245048e+09 -7.837173e+08
## [1857,] -7.309269e+07 -3.772605e+07
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## [1861,] -2.830682e+09 -1.021098e+09
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## [1866,] -9.152235e+06 -7.668386e+06
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## [1869,] -7.278734e+07 -3.840953e+07
## [1870,] -3.505597e+06 -4.275479e+06
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## [1873,] -2.559346e+09 -9.448523e+08
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## [1886,] -1.969028e+09 -6.994359e+08
## [1887,] -6.949738e+07 -3.704222e+07
## [1888,] -3.695560e+06 -4.359541e+06
## [1889,] -4.291401e+06 -4.737384e+06
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## [1891,] -2.770767e+09 -9.911009e+08
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## [1895,] -4.261201e+06 -4.705650e+06
## [1896,] -9.273891e+06 -7.753099e+06
## [1897,] -2.465536e+09 -9.851454e+08
## [1898,] -1.918824e+09 -6.571097e+08
## [1899,] -7.041112e+07 -3.783877e+07
## [1900,] -3.704379e+06 -4.350432e+06
## [1901,] -4.238057e+06 -4.698326e+06
## [1902,] -9.305090e+06 -7.721658e+06
## [1903,] -3.010916e+09 -1.181152e+09
## [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
## [1908,] -9.730639e+06 -7.906560e+06
## [1909,] -3.218865e+09 -1.232903e+09
## [1910,] -2.115287e+09 -7.472196e+08
## [1911,] -7.061256e+07 -3.696137e+07
## [1912,] -3.704521e+06 -4.363039e+06
## [1913,] -4.271801e+06 -4.723184e+06
## [1914,] -9.307113e+06 -7.763460e+06
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## [1917,] -7.187515e+07 -3.917563e+07
## [1918,] -3.596369e+06 -4.257902e+06
## [1919,] -4.362637e+06 -4.792863e+06
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## [1921,] -2.731100e+09 -8.440892e+08
## [1922,] -2.236212e+09 -8.668805e+08
## [1923,] -7.134373e+07 -3.534364e+07
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## [1926,] -9.480506e+06 -7.787743e+06
## [1927,] -2.770204e+09 -9.849056e+08
## [1928,] -2.344833e+09 -8.431174e+08
## [1929,] -6.977409e+07 -3.762854e+07
## [1930,] -3.520469e+06 -4.285723e+06
## [1931,] -4.305679e+06 -4.765226e+06
## [1932,] -9.291901e+06 -7.709645e+06
## [1933,] -2.711494e+09 -1.038159e+09
## [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
## [1938,] -9.504671e+06 -7.970987e+06
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## [1941,] -7.899013e+07 -3.919476e+07
## [1942,] -3.636219e+06 -4.261132e+06
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## [1947,] -7.769319e+07 -4.145429e+07
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## [1971,] -7.703737e+07 -3.991066e+07
## [1972,] -3.708098e+06 -4.438907e+06
## [1973,] -4.311592e+06 -4.790755e+06
## [1974,] -9.678631e+06 -7.953901e+06
## [1975,] -3.688646e+09 -1.285216e+09
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## [1977,] -8.058149e+07 -4.343310e+07
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## [1980,] -9.270819e+06 -7.763622e+06
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## [1985,] -4.342677e+06 -4.795546e+06
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## [1997,] -4.443680e+06 -4.875624e+06
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## [2000,] -1.945872e+09 -6.984662e+08
## [2001,] -7.660751e+07 -4.106371e+07
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## [2005,] -2.633067e+09 -9.665314e+08
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## [2012,] -1.959941e+09 -7.025983e+08
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## [2014,] -3.732104e+06 -4.380473e+06
## [2015,] -4.389869e+06 -4.823559e+06
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## [2041,] -1.631576e+09 -6.398080e+08
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## [2127,] -7.782265e+07 -4.087696e+07
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## [2801,] -4.753883e+06 -5.251894e+06
## [2802,] -1.065167e+07 -8.809732e+06
## [2803,] -3.182040e+09 -1.035402e+09
## [2804,] -1.977953e+09 -6.749338e+08
## [2805,] -8.029696e+07 -4.322428e+07
## [2806,] -4.243911e+06 -4.946849e+06
## [2807,] -4.705053e+06 -5.265653e+06
## [2808,] -1.008846e+07 -8.562272e+06
## [2809,] -2.944631e+09 -1.102328e+09
## [2810,] -2.253780e+09 -8.164567e+08
## [2811,] -7.318734e+07 -3.831056e+07
## [2812,] -4.281017e+06 -4.986903e+06
## [2813,] -4.916182e+06 -5.385919e+06
## [2814,] -1.047707e+07 -8.813669e+06
## [2815,] -2.610689e+09 -8.963182e+08
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## [2817,] -8.071374e+07 -4.590972e+07
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## [2819,] -4.775794e+06 -5.277176e+06
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## [2883,] -7.735475e+07 -4.421641e+07
## [2884,] -4.226701e+06 -4.948154e+06
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## [3005,] -5.029402e+06 -5.525130e+06
## [3006,] -1.039129e+07 -8.692620e+06
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## [3135,] -7.275810e+07 -4.009285e+07
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## [3139,] -3.051455e+09 -1.092862e+09
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## [3289,] -2.966807e+09 -1.115912e+09
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## [4083,] -7.873636e+07 -4.235334e+07
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## [4085,] -5.697440e+06 -6.253725e+06
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## [6978,] -1.537113e+07 -1.316691e+07
## [6979,] -3.370903e+09 -1.221220e+09
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## [6988,] -7.374395e+06 -8.361306e+06
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## [8916,] -1.773972e+07 -1.541236e+07
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## [8919,] -1.044034e+08 -5.905810e+07
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## [8925,] -1.018525e+08 -5.761917e+07
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## [8927,] -9.949290e+06 -1.064820e+07
## [8928,] -1.786004e+07 -1.543037e+07
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## [9868,] -9.510580e+06 -1.073440e+07
## [9869,] -1.059859e+07 -1.140224e+07
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## [9875,] -1.053162e+07 -1.132287e+07
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## [9881,] -1.073855e+07 -1.147084e+07
## [9882,] -1.846316e+07 -1.640550e+07
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## [9887,] -1.069680e+07 -1.146419e+07
## [9888,] -1.892882e+07 -1.648314e+07
## [9889,] -3.238535e+09 -1.129512e+09
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## [9904,] -9.794166e+06 -1.086772e+07
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## [9910,] -9.650105e+06 -1.077951e+07
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## [16612,] -2.105275e+07 -2.277002e+07
## [16613,] -2.241660e+07 -2.365499e+07
## [16614,] -3.466887e+07 -3.114188e+07
## [16615,] -4.154297e+09 -1.291306e+09
## [16616,] -2.975397e+09 -1.028983e+09
## [16617,] -1.506699e+08 -8.888536e+07
## [16618,] -2.115587e+07 -2.284160e+07
## [16619,] -2.266142e+07 -2.382976e+07
## [16620,] -3.413427e+07 -3.083434e+07
## [16621,] -3.269691e+09 -1.091806e+09
## [16622,] -2.387881e+09 -8.311699e+08
## [16623,] -1.408882e+08 -8.756646e+07
```

```
## [16624,] -2.108800e+07 -2.277107e+07
## [16625,] -2.267444e+07 -2.380480e+07
## [16626,] -3.511375e+07 -3.142929e+07
## [16627,] -3.059572e+09 -1.054916e+09
## [16628,] -2.285640e+09 -7.489446e+08
## [16629,] -1.432064e+08 -8.762367e+07
## [16630,] -2.108199e+07 -2.290025e+07
## [16631,] -2.255940e+07 -2.388791e+07
## [16632,] -3.432677e+07 -3.097733e+07
## [16633,] -3.279570e+09 -1.116122e+09
## [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`.