

不要修改这里!

```
from helper import *
```

```
A = generateMatrix(3,seed,singular=False)
```

```
b = np.ones(shape=(3,1),dtype=int) # it doesn't matter
```

```
Ab = augmentMatrix(A.tolist(),b.tolist()) # 请确保你的增广矩阵已经写好了
```

```
printInMatrixFormat(Ab,padding=3,truncating=0)
```

```
-7,  4,  5 |||  1
-4,  6, -1 |||  1
-2, -6, -3 |||  1
```

不要修改这里!

```
A = generateMatrix(3,seed,singular=True)
```

```
b = np.ones(shape=(3,1),dtype=int)
```

```
Ab = augmentMatrix(A.tolist(),b.tolist()) # 请确保你的增广矩阵已经写好了
```

```
printInMatrixFormat(Ab,padding=3,truncating=0)
```

```
7, -1,  7 |||  1
3,  5, -1 |||  1
0,  0,  0 |||  1
```

$$Ab = \begin{pmatrix} 7 & -1 & 7 & 1 \\ 3 & 5 & -1 & 1 \\ 0 & 0 & 0 & 1 \end{pmatrix}$$

$$--> \begin{pmatrix} 1 & \frac{-1}{7} & 1 & \frac{1}{7} \\ 0 & \frac{38}{7} & -4 & \frac{4}{7} \\ 0 & 0 & 0 & 1 \end{pmatrix}$$

$$--> \begin{pmatrix} 1 & 0 & \frac{17}{19} & \frac{21}{133} \\ 0 & 1 & \frac{-14}{19} & \frac{2}{19} \\ 0 & 0 & 0 & 1 \end{pmatrix}$$

$$--> \begin{pmatrix} 1 & 0 & \frac{17}{19} & 0 \\ 0 & 1 & \frac{-14}{19} & 0 \\ 0 & 0 & 0 & 1 \end{pmatrix}$$