

```
import math
deposit=100000
years=5
intrest=12
```

```
amount=deposit*math.pow((1+intrest/100),5)
print(f'amount after 5 years is {amount: .2f}')
```

amount after 5 years is 176234.17

```
PI=3.14159
radius_of_sphere=float(input())
volume_of_sphere=PI*radius_of_sphere**3*4/3
print(f'Sphere volume: {volume_of_sphere: .2f}')
```

6
Sphere volume: 904.78

Gauss-Jordan algorithm

$$\begin{aligned} x_1 + 2x_2 - x_3 &= -2 \\ 2x_1 + 7x_2 - 8x_3 &= -16 \\ -2x_2 + 2x_3 &= 2 \end{aligned}$$

$$\left[\begin{array}{ccc|c} 1 & 2 & -1 & -2 \\ 2 & 7 & -8 & -16 \\ 0 & -2 & 2 & 2 \end{array} \right] \xrightarrow{2R_1 - R_2} \left[\begin{array}{ccc|c} 1 & 2 & -1 & -2 \\ 0 & -3 & 6 & 12 \\ 0 & -2 & 2 & 2 \end{array} \right] \xrightarrow{2R_1 - 2R_2} \left[\begin{array}{ccc|c} 1 & 2 & -1 & -2 \\ 0 & -3 & 6 & 12 \\ 0 & 0 & -6 & -18 \end{array} \right]$$

$$\xrightarrow{6R_1 + R_2} \left[\begin{array}{ccc|c} 6 & 9 & 0 & 0 \\ 0 & -3 & 6 & 12 \\ 0 & 0 & -6 & -18 \end{array} \right] \xrightarrow{R_2 + R_3} \left[\begin{array}{ccc|c} 6 & 9 & 0 & 0 \\ 0 & -3 & 0 & -6 \\ 0 & 0 & -6 & -18 \end{array} \right] \xrightarrow{R_1 + 3R_2} \left[\begin{array}{ccc|c} 6 & 0 & 0 & -18 \\ 0 & -3 & 0 & -6 \\ 0 & 0 & -6 & -18 \end{array} \right]$$

$$\left[\begin{array}{ccc|c} 6 & 0 & 0 & -18 \\ 0 & -3 & 0 & -6 \\ 0 & 0 & -6 & -18 \end{array} \right] \xrightarrow{\frac{1}{6}} \left[\begin{array}{ccc|c} 1 & 0 & 0 & -3 \\ 0 & -3 & 0 & -6 \\ 0 & 0 & 1 & 3 \end{array} \right] \begin{aligned} x_1 &= -3 \\ x_2 &= 2 \\ x_3 &= 3 \end{aligned}$$

