Question 1

In [7]:
```
Length=float(input("Enter the length of the rectangle: "))
Width=float(input("Enter the width of the rectangle: "))
Result=Length*Width
print(f"The area of rectangle is: {Result}")
```

```
The area of rectangle is: 54.0
```

Question 2

In [3]:
```
radius=float(input("Enter the radius of the circle: "))
pi=3.14
circumference=2*pi*radius
print(f"The circumference of the circle is: {circumference}")
```

```
The circumference of the circle is: 270.04
```

Question 3

In [10]:
```
principle=float(input("Enter Principle:"))
rate=float(input("Enter rate: "))
time=float(input("Enter time in years: "))
simpint=principle*rate*time
print(f"Total interest: {simpint}")
```

```
Total interest: 45000000.0
```

Question 4

In [8]:
```
dist=float(input("Enter distance: "))
time=float(input("Enter time: "))
speed=dist/time
print(f"The speed of the object is: {speed} kms/hr")
```

```
The speed of the object is: 350.0 kms/hr
```

Question 5

In [6]:
```
weight=float(input("Enter weight in kg:"))
height=float(input("Enter height in meters:"))
bmi=weight/height**2
print(f"BMI = {bmi}")
```

```
BMI = 18.726007303142847
```

Question 6

In [7]:
```
m=float(input("Enter mass in kg:"))
a=float(input("Enter acceleration in meters/s²:"))
force=m*a
print(f"The force of the object is: {force}")
```

```
The force of the object is: 432.0
```

Question 7

In [11]:
```
p=float(input("Enter Principle:"))
r=float(input("Enter rate: "))
t=float(input("Enter time in years: "))
n=float(input("Enter number of times interest is compounded in a year:"))
A=p*(1+r/n)**n*t
print(f"The total:{A} ")
```

```
The total:378000.0
```

Question 8

In [2]:
```
a=float(input("Enter length of side a: "))
b=float(input("Enter length of side b: "))
c=float(input("Enter length of side c: "))
perim=a+b+c
print(f"The perimeter of the triangle is:{perim}")
```

```
The perimeter of the triangle is:23.0
```

Question 9

In [13]:
```
rad=float(input("Enter radius:"))
vol=(4/3)*pi*rad**3
print(f"The volume of the sphere is:{vol}")
```

```
The volume of the sphere is:137188.69333333333
```

Question 10

In [12]:
```
mass=float(input("Enter mass:"))
vel=float(input("Enter velocity:"))
ke=(1/2)*mass*vel**2
print(f"Kinetic energy:{ke}")
```

```
Kinetic energy:2304.0
```

Question 11

In [ ]:
```

```

Question 12

In [5]:
```
cels=float(input("Enter temperature in celsius:"))
far=(9/5*cels)+32
print(f"Temperature in fahrenheit:{far}")
```

```
Temperature in fahrenheit:89.6
```

Question 13

In [4]:
```
m1=float(input("Enter mass of Object1:"))
m2=float(input("Enter mass of Object2:"))
rr=float(input("Enter distance b/w centers of objects:"))
G=6.673*(10**-11)
fl=(G*m1*m2)/(rr**2)
print(f"Gravitational force b/w the two objects is: {fl}")
```

```
Gravitational force b/w the two objects is: 2.6691999999999996e-07
```

Question 14

In [7]:
```
r=float(input("Enter radius:"))
h=float(input("Enter height:"))
pi=3.14
voll=(pi*r**2)*h
print(f"Volume is: {voll}")
```

```
Volume is: 36210.479999999996
```

Question 15

In [8]:
```
F=float(input("Enter force:"))
A=float(input("Enter area:"))
P=F/A
print(f"Pressure is: {P}")
```

```
Pressure is: 0.0555
```

Question 16

In [11]:
```
V=float(input("Enter voltage:"))
I=float(input("Enter current:"))
Pow=V/I
print(f"Power is: {Pow}")
```

```
Power is: 2.0
```

Question 17

In [13]:
```
r=float(input("Enter radius:"))
pi=3.14
P=2*pi*r
print(f"Perimeter of Circle is:{P}")
```

```
Perimeter of Circle is:621.72
```

Question 18

In [17]:
```
PV=float(input("Enter Present Value:"))
ra=float(input("Enter annual interest rate:"))
ti=float(input("Enter time in years:"))
FV=PV*(1+ra)*ti
print(f"Future value:{FV}")
```

```
Future value:2000000.0
```

Question 19

In [1]:
```
f=float(input("Enter force:"))
d=float(input("Enter distance:"))
theta=float(input("Enter theta:"))
w=(f*d)*theta
print(f"Total work done:{w}")
```

```
Total work done:11500.0
```

Question 20

In [2]:
```
m=float(input("Enter mass:"))
c=float(input("Enter specific heat capacity:"))
T=float(input("Enter change:"))
```

```
Q=m*c*T
print(f"Total heat transferred:{Q}")
```

```
Total heat transferred:103680000.0
```

In [ ]: