**Questions:**

1. **Area of a Rectangle:**

Write a Python program to calculate the area of a rectangle. Use the formula:

Take length and width as inputs from the user.

1. **Circumference of a Circle:**

Write a Python program to calculate the circumference of a circle. Use the formula:

Take the radius r as input from the user.

1. **Simple Interest**:

Write a Python program to calculate the simple interest. Use the formula:

**​**

Take Principal, Rate, and Time as inputs from the user.

1. **Speed of an Object:**

Write a Python program to calculate the speed of an object. Use the formula:

Take Distance and Time as inputs from the user.

1. **BMI Calculator:**

Write a Python program to calculate the Body Mass Index (BMI). Use the formula:

BMI =

Take Weight (in kilograms) and Height (in meters) as inputs from the user.

1. **Force Using Newton's Second Law:**

Write a Python program to calculate the force on an object. Use the formula:

Take m (mass in kilograms) and a (acceleration in meters/second²) as inputs from the user.

1. **Compound Interest:**

Write a Python program to calculate compound interest. Use the formula:

**n-t**

Where:

A= total amount

P = principal amount

r = annual interest rate (decimal)

n = number of times interest is compounded per year

t = time in years

Take P, r, n, and t as inputs from the user.

1. **Perimeter of a Triangle:**

Write a Python program to calculate the perimeter of a triangle. Use the formula:

Take a, b, and c (lengths of the three sides) as inputs from the user.

1. **Volume of a Sphere:**

Write a Python program to calculate the volume of a sphere. Use the formula:

Take r (radius) as input from the user.

1. **Kinetic Energy:**

Write a Python program to calculate the kinetic energy of an object. Use the formula:

Take m (mass in kilograms) and v (velocity in meters/second) as inputs from the user.

1. **Quadratic Equation Roots:**

Write a Python program to find the roots of a quadratic equation. Use the formula:

X =

Take a, b, and c as inputs from the user.

1. **Temperature Conversion:**

Write a Python program to convert a temperature from Celsius to Fahrenheit. Use the formula:

Take C (temperature in Celsius) as input from the user.

1. **Gravitational Force:**

Write a Python program to calculate the gravitational force between two objects. Use the formula

m1, m2 are the masses of the objects

r = distance between the centers of the objects

Take m1, m2 and r as inputs from the user.

1. **Volume of a Cylinder:**

Write a Python program to calculate the volume of a cylinder. Use the formula:

Take radius(r) and height(h) as inputs from the user

1. **Pressure:**

Write a Python program to calculate the pressure exerted by a force on a surface. Use the formula:

P = pressure

F = force

A = area

Take F(force) and A(area) as inputs from the user.

1. **Electric Power:**

Write a Python program to calculate the electric power consumed. Use the formula:

where:

P = power

V = voltage

I = current

Take V(voltage) and I(current) as inputs from the user.

1. **Perimeter of a Circle (Circumference):**

Write a Python program to calculate the perimeter (circumference) of a circle. Use the formula:

Take r (radius) as input from the user.

1. **Future Value in Savings:**

Write a Python program to calculate the future value of an investment. Use the formula:

where:

* + FV= future value
  + PV= present value
  + r= annual interest rate (as a decimal)
  + t= time in years

Take PV, r, and t as inputs from the user.

1. **Work Done by a Force:**

Write a Python program to calculate the work done by a force. Use the formula:

where:

W = work done

f= force

d = distance

theta = angle between force and direction of movement (in degrees)

Take f, d, and θ as inputs from the user.

1. **Heat Transfer:**

Write a Python program to calculate the amount of heat transferred. Use the formula:

where:

Q= heat transfer

m = mass

c = specific heat capacity

ΔT

Take m, c, T as inputs from the user.