**1.\_Write a program to calculate the percentage of student based on marks of any 5 subjects.**

**sci = 49**

**mat = 48**

**his = 47**

**geog = 45**

**eng = 50**

**sum\_of\_subjects = (sci + mat + his + geog + eng)**

**out\_of\_marks = (5 \* 50)**

**percentage\_stud = (sum\_of\_subjects / out\_of\_marks) \* 100**

**print("Percentage =",percentage\_stud)**

**2. Write a program to calculate area of rectangle based on length and breadth.**

**length = 12**

**breadth = 7**

**area\_rect = length \* breadth**

**print("Area of rectangle = ", area\_rect)**

**3. Program to find quotient and remainder of two numbers.**

**num1 = int(input("Enter a number 1 : "))**

**num2 = int(input("Enter a number 2 : "))**

**quo = num1 // num2**

**rem = num1 % num2**

**print("Quotient = ", quo)**

**print("Remainder = ", rem)**

**4. Write a program to enter P, T, R and calculate simple Interest, and**

**5. Write a program to enter P, T, R and calculate Compound Interest.**

**principal = 4000**

**time = 4**

**interest\_rate = 0.025**

**si = principal \* interest\_rate \* time**

**ci = principal \* ((1 + interest\_rate) \*\* time)**

**amt\_earned = ci - principal**

**print("Simple interest = ", si)**

**print("Compound interest = ", ci)**

**print("Amount earned in interest = ",amt\_earned)**

**6. WAP to input two angles from user and find third angle of the triangle,**

**9. WAP to enter the base and height of a triangle and find its area, and**

**10. WAP to calculate the area of an equilateral triangle.**

**a = int(input("Enter angle A of the triangle = "))**

**b = int(input("Enter angle B of the triangle = "))**

**c = 180 - (a + b)**

**base = 18**

**height = 22**

**tri\_area = 0.5 \* base \* height**

**a\_side = 5**

**equ\_tri\_area = ((3 \*\* 0.5) / 4) \* (a\_side \*\* 2)**

**print("Third angle of triangle is = ",c)**

**print("Area of triangle is = ",tri\_area)**

**print("Area of equilateral triangle is = ",equ\_tri\_area)**

**7. Program to Find the Roots of a Quadratic Equation.**

**a = 1**

**b = 4**

**c = 3**

**inner\_sqrt\_calc = (b\*\*2 - (4\*a\*c)) / (2\*a)**

**sqrt\_calc = inner\_sqrt\_calc \*\* 0.5**

**x = b + sqrt\_calc**

**y = b - sqrt\_calc**

**print("Points of Quadratic equation are: ")**

**print("x =",x,"and y =",y)**

**8. Write a program to convert days into years, weeks and days.**

**days = 27 \* 365**

**weeks = days / 7**

**years = days / 365**

**print("Days = ", days)**

**print("Weeks = ", weeks)**

**print("Years = ", years)**

**11. Find the area and circumference of circle, and**

**12. Find the volume of sphere.**

**pi = 3.142**

**radius = 5**

**area = pi \* (radius \*\* 2)**

**circumference = 2 \* pi \* radius**

**volume = (4/3) \* pi \* (radius \*\* 2)**

**print("Area of circle = ",area)**

**print("Circumference of circle = ",circumference)**

**print("Volume of sphere = ",volume)**