

Assignment 1

Basic Operations

Question # 1

Calculate area of triangle according to following conditions.

- User will give value of both height and width of the triangle
- Calculate area of the triangle according to user's values.

Note: Formula of area of triangle is given below. In this formula, “height” and “width” are related to the triangle

$$Area = \frac{height * width}{2}$$

Question # 2

Calculate area of rectangular according to following conditions.

- User will give value of both length and width of the rectangular
- Calculate area of the rectangular according to user's values.

Note: Formula of area of rectangular is given below. In this formula, “length” and “width” are related to the rectangular.

$$Area = length * width$$

Question # 3

Calculate circumference of circle according to following conditions. For value of π , you can use value as 3.14.

- User will give value of radius of the circle
- Calculate circumference of the circle according to user's values.

Note: Formula of circumference is given below. In this formula, “radius” is related to the circle.

$$Area = 2 * \pi * radius$$

Question # 4

Calculate area of circle according to following conditions. For value of π , you can use value as 3.14.

- User will give value of radius of the circle
- Calculate area of the circle according to user's values.

Note: Formula of area is given below. In this formula, “radius” is related to the circle.

$$Area = \pi * (radius)^2$$

Question # 4

Calculate value of temperature in Fahrenheit according to following conditions.

- User will give value of temperature in Celsius
- Calculate value of temperature in Fahrenheit according to user's values.

Note: Formula of temperature in Fahrenheit is given below. In this formula, "F" is used for temperature in Fahrenheit and "C" is used for temperature in Celsius.

$$F = \frac{9}{5} * C + 32$$

Question # 5

Calculate value of temperature in Celsius according to following conditions.

- User will give value of temperature in Fahrenheit
- Calculate value of temperature in Celsius according to user's values.

Note: Formula of temperature in Celsius is given below. In this formula, "F" is used for temperature in Fahrenheit and "C" is used for temperature in Celsius.

$$C = \frac{5}{9} * (F - 32)$$

Question # 6

Calculate a person's height in centimeters according to following conditions.

- User will give value of height in inches.
- Calculate value of height in centimeters according to user's values.

Note: You can use following formula to convert inches to centimeter.

$$1 \text{ centimeter} = 2.54 \text{ inches}$$

Question # 7

Calculate a person's height in inches according to following conditions.

- User will give value of height in foots.
- Calculate value of height in inches according to user's values.

Note: You can use following formula to convert foots to inches.

$$1 \text{ foot} = 12 \text{ inches}$$

Question # 8

Calculate final velocity of a car according to following condition.

- User will give initial velocity, acceleration and time for the car after which it will be stopped.
- Calculate final velocity at the time when the car is stopped.

Note: You can use following formula to calculate final velocity. In this formula, “ V_f ”, “ V_i ”, “ a ” and “ t ” are final velocity, initial velocity, acceleration and time for the car.

$$V_f = V_i + at$$

Question # 9

Calculate following expression according to user defined values (a, b, c and d).

$$a * \frac{b}{-c * 31\%13} * d$$

Note: output result should be verified by manual calculation using calculator.

Question # 10

Calculate following expression according to user defined values (a, b, c and d).

$$(a/b) * \frac{20\%3}{-c * 31\%13} * d$$

Note: output result should be verified by manual calculation using calculator.