

## First Program

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Write Python programs to:

1. Calculate and print the area of a circle.  $Area = \pi r^2$
2. Calculate and print the area of a triangle.  $Area = 0.5 * base * height$
3. Calculate and print the average of 3 numbers.  $Avg = (x+y+z)/3$
4. Calculate and print the distance between two points  $(x_1, y_1)$  and  $(x_2, y_2)$   
 $Dist = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
5. Given number of weeks, calculate and print the number of minutes.
6. Calculate and print the number of days in N hours and the remaining hours.
7. Calculate and print the number of trays, N, needed to hold X glasses if each tray contains Y glasses.
8. If you distribute N apples in groups of 7 apples each, how many groups will contain exactly 7 apples and how many apples remain?
9. Display N grams in the form of number of kilograms and number of grams.
10. Given temperature values in Celsius units ( $T_c$ ), calculate the corresponding values of Kelvin units ( $T_k$ ) according to the following relations.

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$$T_F = T_R - 459.67$$

$$T_F = \frac{9}{5}T_C + 32$$

$$T_R = \frac{9}{5}T_K$$

11. Write a program that reads two values, X and Y, from the user. The program then swaps the values of X and Y. You should print the values of X and Y before and after swap.

Example:

**Enter x:10**

**Enter y:20**

**Before swap: x=10, y =20**

**After swap: x=20, y =10**

12. Write a program that asks the user for three one-digit numbers and then uses them as units, tens, and hundreds to evaluate one 3-digit number out of them

Example:

**Please enter units: 5**

**Please enter tens: 2**

**Please enter hundreds: 9**

**The number is: 925**