2. Floating Point Number

Problem 1

Two positive numbers will be given as input. You have to calculate and print their division result (including decimal fraction).

Sample Input	Output
12 8	1.500000

Problem 2

The heights of three people are given (in meters). Print their average height (up to two digits after the decimal point).

Sample Input	Output
1.65 1.82 1.71	1.73

Problem 3

You know the heights of all your classmates in meters. You want to determine the height in feet and inches. Write a program that converts height from meters to feet and inches.

Sample Input	Output
1.94	6 feet 4.98 inch
1.58	5 feet 2.20 inch

Problem 4

Input the base and height of a triangle and print its area.

Sample Input	Output
3 4	6.00

Problem 5

Input the radius of a sphere. Print its surface area and volume.

Sample Input	Output
3	Surface Area: 113.10 Volume: 113.10

Problem 6

Find the value of the given mathematical expression.

$x^5 - 3x^4 - 7x^3 + 13x^2 + 3742$

Sample Input	Output
5	4442.00
-5	-58

Problem 7

The temperature of a room is given in degrees Celsius (°C). Convert it into degrees Fahrenheit (°F).

Sample Input	Output
36.8	98.24

Problem 8

Input a fractional number and print it in scientific notation.

Sample Input	Output
5	5.000000e+000
890e12	8.900000e+14

Exercise 2.1

1. You have a basket of apples. Input the total number of apples and the average weight of each apple (in grams) and print the total weight of all apples (in kilograms).
2. Write a program to determine the value of the following expressions:
   a. $x^2 - 5x + 12$
   b. $e^{5x - 1}$
   c. $\sin(x/2)$
   d. $\cos^2(2x - 1)$
   e. $\log_2 x^3 + 3x - 1$

3. Write programs to perform the following conversions:
   a) centimeter to inch
   b) inch to centimeter
   c) foot to meter
   d) meter to foot
   e) pound to kilogram
   f) kilogram to pound
   g) kilometer to mile
   h) mile to kilometer
   i) km/hour to mile/hour
   j) mile/hour to km/hour
4. Input the length of one side of a square and print its area.
5. Input the length and width of a rectangle and print its area.
6. Input the length of two sides of a right triangle and print its area.
7. Input the length of one edge of a cube and print its volume and surface area.
8. Input the radius of the base and height of a cylinder and print its volume and curved surface area.
9. Input the ages of ten people and print their average age.