

WIX1002 Fundamentals of Programming
Semester 1 2016/2017
Lab 2: Java Fundamental

1. Write a program that convert the temperature in degree Fahrenheit to degree Celsius. The program will display the degree Celsius in two decimal places.

$$\text{Celsius} = (\text{Fahrenheit} - 32) / 1.8$$

2. Write a program to calculate the monthly payment for car loan. The following are the inputs of the program. Output the monthly payment in two decimal places.

P	The price of the car
D	Downpayment
R	Interest Rate in %
Y	Loan duration in year
M	Monthly Payment

$$M = (P - D) * (1 + R*Y/100) / (Y * 12)$$

3. Write a program that generates three random numbers. The range of the random number is 0 to 100. Display the three numbers, sum of the numbers and the average in two decimal places.
4. Write a program that convert the money to coins. The input of the money is in two decimal places. The coins consist of 50 cents, 20 cents, 10 cents, 5 cents and 1 cent.
5. Write a program that generates one random number. The range of the random number is 0 to 10000. Display the number and the sum of all the digits in the number.
6. If you invest the amount of P at R% interest rate annually. In N years, your investment will be $P[1-(R/100)^{N+1}] / (1 - R/100)$. Accepts the input of P, R and N and compute the amount of money earned after N years using computer currency format. (Note: Math.pow(A,B) - A raise to the power of B)

Correct formula: $P[1+R/100]^N$