

Assignment 1

Date: 18/09/2020

Submission Date: 21/09/2020

1. Write a Java program to print 'Hello' on screen and then print your name on a separate line.

Expected Output :

Hello

Alexandra Abramov

2. Write a Java program to print the sum of two numbers.

Test Data: $74 + 36$

3. Write a Java program to divide two numbers and print on the screen.

Test Data : $50/3$

Expected Output : 16

4. Write a Java program to print the result of the following operations.

Test Data:

a. $-5 + 8 * 6$

b. $(55+9) \% 9$

c. $20 + -3*5 / 8$

d. $5 + 15 / 3 * 2 - 8 \% 3$

Expected Output :

43

1

19

13

5. Write a Java program that takes two numbers as input and display the product of two numbers.

Test Data:

Input first number: 25

Input second number: 5

Expected Output :

$25 \times 5 = 125$

6. Write a Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers.

Test Data:

Input first number: 125

Input second number: 24

Expected Output :

$125 + 24 = 149$

$125 - 24 = 101$

$125 \times 24 = 3000$

$125 / 24 = 5$
 $125 \bmod 24 = 5$

7. Write a Java program that takes a number as input and prints its multiplication table upto 10.

Test Data:

Input a number: 8

Expected Output :

8 x 1 = 8

8 x 2 = 16

8 x 3 = 24

...

8 x 10 = 80

8. Write a Java program to display the following pattern.

Sample Pattern :

```

    J    a    v        v    a
      J    a a    v    v    a a
J    J    aaaaa    V V    aaaaa
  JJ    a        a    V    a        a
```

9. Write a Java program to compute the specified expressions and print the output.

Test Data:

$((25.5 * 3.5 - 3.5 * 3.5) / (40.5 - 4.5))$

Expected Output

2.138888888888889

10. Write a Java program to compute a specified formula.

Specified Formula :

$4.0 * (1 - (1.0/3) + (1.0/5) - (1.0/7) + (1.0/9) - (1.0/11))$

Expected Output

2.9760461760461765

11. Write a Java program to print the area and perimeter of a circle.

Test Data:

Radius = 7.5

Expected Output

Perimeter is = 47.12388980384689

Area is = 176.71458676442586

12. Write a Java program that takes three numbers as input to calculate and print the average of the numbers.

13. Write a Java program to print the area and perimeter of a rectangle.

Test Data:

Width = 5.5 Height = 8.5

Expected Output

Area is $5.6 * 8.5 = 47.60$

Perimeter is $2 * (5.6 + 8.5) = 28.20$

14. Write a Java program to print an American flag on the screen.

Expected Output

```
* * * * * * =====
* * * * * * =====
* * * * * * =====
* * * * * * =====
* * * * * * =====
* * * * * * =====
* * * * * * =====
* * * * * * =====
=====
=====
=====
=====
=====
=====
```

15. Write a Java program to swap two variables.

16. Write a Java program to print a face.

Expected Output

```
+ " " " " +
[ | o o | ]
|   ^   |
| ' - ' |
+-----+
```

17. Write a Java program to add two binary numbers.

Input Data:

Input first binary number: 10

Input second binary number: 11

Expected Output

Sum of two binary numbers: 101

18. Write a Java program to multiply two binary numbers.

Input Data:

Input the first binary number: 10

Input the second binary number: 11

Expected Output

Product of two binary numbers: 110

19. Write a Java program to convert a decimal number to binary number.

Input Data:

Input a Decimal Number : 5

Expected Output

Binary number is: 101

20. Write a Java program to convert a decimal number to hexadecimal number.

Input Data:

Input a decimal number: 15

Expected Output

Hexadecimal number is : F

21. Write a Java program to convert a decimal number to octal number.

Input Data:

Input a Decimal Number: 15

Expected Output

Octal number is: 17

22. Write a Java program to convert a binary number to decimal number.

Input Data:

Input a binary number: 100

Expected Output

Decimal Number: 4

23. Write a Java program to convert a binary number to hexadecimal number.

Input Data:

Input a Binary Number: 1101

Expected Output

HexaDecimal value: D

24. Write a Java program to convert a binary number to a Octal number.

Input Data:

Input a Binary Number: 111

Expected Output

Octal number: 7

25. Write a Java program to convert a octal number to a decimal number.

Input Data:

Input any octal number: 10

Expected Output

Equivalent decimal number: 8