**Assignment2**

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

Expected Output:

Hello

Alexandra Abramov

**Program:**

class hello{

public static void main(String d[])

{

System.out.println("Hello");

System.out.println("Alexandra Abramov");

}

}

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

Test Data: 74 + 36

**Program:**

class sum{

public static void main(String abc[]){

int n1 = 74;

int n2 = 36;

int sum = n1+n2;

System.out.println(+n1+"+"+n2+"="+sum);

}}

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

Test Data : 50/3

Expected Output : 16

**Program:**

class devide{

public static void main(String []d){

int i = 50;

int j = 3;

int k = i/j;

System.out.println(+i+"/"+j);

System.out.println("Output ="+k);}}

**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

**Program:**

class result{

public static void main(String xxx[]){

int n1 = -5; int n2 = 8; int n3 = 6;

int r = n1+n2\*n3;

System.out.println(+n1+"+"+n2+"\*"+n3+"="+r);

int a = 55; int b = 9; int c = 9;

int r1 = (a+b)%c;

System.out.println("("+a+"+"+b+")"+"%"+c+"="+r1);

int i = 20; int j = -3; int k = 5; int l = 8;

int r2 = i+j\*k/l;

System.out.println(+i+"+"+j+"\*"+k+"/"+l+"="+r2);

int m = 5; int n = 15; int o = 3; int p = 2; int q = 8; int e = 3;

int r3 = m+n/o\*p-q%e;

System.out.println(+m+"+"+n+"/"+o+"\*"+p+"-"+q+"%"+e+"="+r3);}

}

**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 x 5 = 125

**Program:**

class product{

public static void main(String args[]){

String s1 = args[0];

String s2 = args[1];

int i = Integer.parseInt(s1);

System.out.println("Input first number:"+i);

int j = Integer.parseInt(s2);

System.out.println("Input second number:"+j);

int k = i\*j;

System.out.println(+i+"\*"+j+"="+k);

}}

**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 x 24 = 3000

125 / 24 = 5

125 mod 24 = 5

**Program:**

class operation{

public static void main(String args[]){

String s1 = args[0];

String s2 = args[1];

int i = Integer.parseInt(s1);

System.out.println("Input first number:"+i);

int j = Integer.parseInt(s2);

System.out.println("Input second number:"+j);

int k = i+j;

int l = i-j;

int m = i\*j;

int n = i/j;

int o = i%j;

System.out.println(+i+"+"+j+"="+k);

System.out.println(+i+"-"+j+"="+l);

System.out.println(+i+"\*"+j+"="+m);

System.out.println(+i+"/"+j+"="+n);

System.out.println(+i+"%"+j+"="+o);

}}

**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

**Program:**

class table{

public static void main(String abc[]){

String s1 = abc[0];

int i = Integer.parseInt(s1);

System.out.println("Input a number:"+i);

int k;

int j = 1;

do{

k = i\*j;

System.out.println(+i+"\*"+j+"="+k);

++j;}

while(j<=10);

}}

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

Sample Pattern :

**Program:**

class pattern{

public static void main(String sd[]){

System.out.println(" j a v v a ");

System.out.println(" j a a v v a a ");

System.out.println(" j j aaaaa v v aaaaa ");

System.out.println(" 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

**Program:**

class expression{

public static void main(String gr[]){

double a = 25.5;

double b = 3.5;

double c = 40.5;

double d = 4.5;

double i = ((a\*b-b\*b)/(c-d));

System.out.println("("+"("+a+"\*"+b+"-"+b+"\*"+b+")"+"/"+"("+c+"-"+d+")"+")");

System.out.println(i);

}}

**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

**Program:**

class formula{

public static void main(String ff[]){

double a = 4.0;

int b = 1;

double c = 1.0;

int d = 3;

int e = 5;

int f = 7;

int g = 9;

int h = 11;

double i = a\*(b-(c/d)+(c/e)-(c/f)+(c/g)-(c/h));

System.out.println(+a+"\*"+"("+b+"-"+"("+c+"/"+d+")"+"+"+"("+c+"/"+e+")"+"-"+"("+c+"/"+f+")"+"+"+"("+c+"/"+g+")"+"-"+"("+c+"/"+h+")"+")");

System.out.println(i);

}}

**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

**Program:**

class circle{

public static void main(String ags[]){

double r = 7.5;

final float pi = 3.142f;

System.out.println("Radius ="+r);

double p = 2\*pi\*r;

System.out.println("Perimeter is ="+p);

double a = pi\*r\*r;

System.out.println("Area is ="+a);

}}

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

**Program:**

import java.util.\*;

class average{

public static void main(String ags[]){

Scanner sc = new Scanner(System.in);

int n1,n2,n3;

n1 = sc.nextInt();

System.out.println("Number1:"+n1);

n2 = sc.nextInt();

System.out.println("Number2:"+n2);

n3 = sc.nextInt();

System.out.println("Number3:"+n3);

int n = (n1+n2+n3)/3;

System.out.println("Average is:"+n);

}}

**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

**Program:**

class rectangle{

public static void main(String ags[]){

float w = 5.6f;

float h = 8.5f;

System.out.println("Width ="+w);

System.out.println("Height ="+h);

float a = w\*h;

System.out.println("Area is "+w+"\*"+h+"="+a);

float p = 2\*(w+h);

System.out.println("Perimeter is "+"2"+"\*"+"("+w+"+"+h+")"+"="+p);

}}

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

Expected Output

**Program:**

class flag{

public static void main(String qq[]){

int nl = 15;

int i;

int j = 1;

while(j<=6){

if((nl%j)==0)

System.out.println("\* \* \* \* \* \* ===================================");

else

{System.out.println(" \* \* \* \* \* ===================================");}

++j;}

System.out.println("\* \* \* \* \* \* ===================================");

System.out.println(" \* \* \* \* \* ===================================");

System.out.println("\* \* \* \* \* \* ===================================");

i=10;

while(i<=nl){System.out.println("====================================================");++i;}

}}

**15. Write a Java program to swap two variables.**

**Program:**

class Swap{

public static void main(String []ggg){

String a = ggg[0];

String b = ggg[1];

int i = Integer.parseInt(a);

System.out.println("First number: i ="+i);

int j = Integer.parseInt(b);

System.out.println("Second number: j ="+j);

i = i+j;

j = i-j;

System.out.println("Swap num "+"j"+":"+j);

i = i-j;

System.out.println("Swap num "+"i"+":"+i);

}}

**16. Write a Java program to print a face.**

**Program:**

class face{

public static void main(String args[]){

System.out.println(" +\"\"\"\"\"+");

System.out.println("[| o o |]");

System.out.println(" | ^ |");

System.out.println(" | '-' |");

System.out.println(" +-----+");

}}