Assignment 3 Solution

Theory Questions with Answers:

1. WAP to calculate and print the surface area of cuboid whose length, breadth and height will be given by the user.

Ans:

```
import java.util.*;
class cuboid {
  public static void main(String Args[ ]){
     double l,b,h,sa;
    Scanner sc = new Scanner(System.in);
    l = sc.nextDouble();
    b = sc.nextDouble();
    h = sc.nextDouble();
     sa = 2*(l*b+b*h+l*h);
    System.out.println(sa);
}
}
```

2. WAP to input two numbers from the user and find the maximum number between the two and print it as a output. [Using only math function]

Ans:

```
import java.util.*;
class maximum {
  public static void main(String Args[ ]){
     int a,b,max;
    Scanner sc = new Scanner(System.in);
    a = sc.nextInt();
    b = sc.nextInt();
    max = Math.max(a,b);
    System.out.println(max);
}
}
```

3. WAP to evaluate the expression x = $\sqrt{A^2 + B^2}$ where the value of A and B wil be given by the user and print the value of x.

Ans:

```
import java.util.*;
class expression {
  public static void main(String Args[ ]){
     int a,b,result;
    Scanner sc = new Scanner(System.in);
    a = sc.nextInt();
    b = sc.nextInt();
    result = Math.sqrt(a*a+b*b);
    System.out.println(result);
}
}
```

4. WAP to evaluate the expression y = $ax^3 + bx^2 + cx + d$, where the value of a, b and x will be given by the user and print the value of y.

Ans:

```
import java.util.*;
class expression {
  public static void main(String Args[ ]){
     int a,b,x,c,d,result;
    Scanner sc = new Scanner(System.in);
    a = sc.nextInt();
    b = sc.nextInt();
    c = sc.nextInt();
    d = sc.nextInt();
    x = sc.nextInt();
    result = Math.sqrt(a*x*x*x + b*x*x + c*x +d);
    System.out.println(result);
 }
```

5. What is the difference between math.ceil and math.floor?

Ans:

Math.ceil	***Math.floor***
• The Math.ceil() function rounds a floating point value up to the nearest integer value. The rounded value is returned as a double.	• The Math.floor() function rounds a floating point value down to the nearest integer value. The rounded value is returned as a double.
• **double ceil = Math.ceil(7.343); // ceil = 8.0**	• **double floor = Math.floor(7.343); // floor = 7.0**

6. Evaluate the value of y the following JAVA Expression: double y = Math.ceil(-31.887)+ Math.round(234.44)+Math.max(-45, -50).

Ans: y = -31 +234 + (-45)
y = 160

7. Write the equivalent JAVA Expression of S = ut + 1/2 at^2.

Ans: S = u*t + 0.5*a*t*t.