Solutions of Assignment 2

1.

```
import java.util.*;
class Q1
{
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter a degree in Fahrenheit: ");
		double F = sc.nextDouble();
		double C = (5.0/9)*(F-32);
		System.out.println(F+ "Fahrenheit is "+C+" Celsius");
	}
}
```

2.

```
import java.util.*;
class Q2
{
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter the distance in km=");
		int km = sc.nextInt();
		System.out.println(km+ "km is "+(km*1000)+" meters");
		System.out.println(km+ "km is "+(km*3280.8399)+" feet");
		System.out.println(km+ "km is "+(km*39370.0787)+" inch");
		System.out.println(km+ "km is "+(km*100000)+" centimeters");
	}
}
```

3.

```
import java.util.*;
class Q3
{
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter basic salary: ");
```

```
                int BS = sc.nextInt();
                double DA = 0.40 * BS;
                double HRA = 0.20 * BS;
                double GS = BS + DA + HRA;
                System.out.println("Basic Salary is "+ BS);
                System.out.println("DA is  "+ DA);
                System.out.println("HRA is  "+ HRA);
                System.out.println("Gross Salary is "+GS);
        }
}
```

4.

```
import java.util.*;
class Q4
{
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.println("Enter a number between 0 and 1000: ");
                int No = sc.nextInt();
                int lastDigit = No%10;
                int middleDigit = (No%100)/10;
                int firstDigit = No/100;
                int sum = firstDigit + middleDigit + lastDigit;
                System.out.println("The sum of the digits is "+ sum);
        }
}
```

5.

```
import java.util.*;
class Q5
{
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.println("Enter the radius of the hemisphere:: ");
                double r = sc.nextDouble();
                double area = 3*Math.PI*Math.pow(r,2);
                double volume = (2.0/3)*Math.PI*r*r*r;
                System.out.println("The surface area of the hemisphere is "+ area);
                System.out.println("The volume area of the hemisphere is "+ volume);
        }
```

```
}
```

6.

```
import java.util.*;
class Q6
{
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter the number of seconds: ");
		double t = sc.nextDouble();
		double g = 32.174;
		double d = 0.5*g*Math.pow(t,2);
		System.out.println("Distance traveled: "+ d);
	}
}
```

7.

```
import java.util.*;
class Q7
{
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("a \t b \t pow(a, b)");
		int i = 1;
		int j = 2;
		System.out.println(i+"\t"+j+"\t"+(int)Math.pow(i,j));
		i++;
		j++;
		System.out.println(i+"\t"+j+"\t"+(int)Math.pow(i,j));
		i++;
		j++;
		System.out.println(i+"\t"+j+"\t"+(int)Math.pow(i,j));
		i++;
		j++;
		System.out.println(i+"\t"+j+"\t"+(int)Math.pow(i,j));
		i++;
		j++;
		System.out.println(i+"\t"+j+"\t"+(int)Math.pow(i,j));
	}
```

}

Home assignment

1.

```
import java.util.*;
class HQ1
{
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter the number of minutes:  ");
		long m = sc.nextLong();
		long day = m/(24*60);
		long year = day/365;
		long remDay = day %365;
		System.out.println(m+" minutes is approximately "+year+" years and "+remDay+"
days.");
	}
}
```

2.

```
import java.util.*;
public class HQ2
{
	public static void main(String[] args)
	 {
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter the number of eggs:  ");
		int eggs = sc.nextInt();
		int gross = eggs/144;
		eggs = eggs%144;
		int dozon = eggs/12;
		eggs = eggs%12;
		System.out.println("Your number of eggs is "+gross+" gross, "+dozon+" dozon,
and "+eggs);
	}
}
```

3.

```
import java.util.*;
class HQ3
{
	public static void main(String[] args)
	{
		Scanner sc = new Scanner(System.in);
		System.out.println("Enter three points for a triangle:  ");
		double x1 = sc.nextDouble();
		double y1 = sc.nextDouble();
		double x2 = sc.nextDouble();
		double y2 = sc.nextDouble();
		double x3 = sc.nextDouble();
		double y3 = sc.nextDouble();
		double side1 = Math.sqrt(Math.pow((x1-x2),2) + Math.pow((y1-y2),2));
		double side2 = Math.sqrt(Math.pow((x1-x3),2) + Math.pow((y1-y3),2));
		double side3 = Math.sqrt(Math.pow((x2-x3),2) + Math.pow((y2-y3),2));
		double s = (side1 +side2 + side3)/2;
		double area = Math.sqrt(s*(s-side1)*(s-side2)*(s-side3));
		System.out.println("The area of triangle is "+area);
	}

}
```

Command-Line Argument

1.

```
public class cmdQ1
{
   public static void main(String args[])
   {
	int dividend = Integer.parseInt(args[0]);
	int divisor = Integer.parseInt(args[1]);
	int quotient = dividend/divisor;
	int remainder = dividend%divisor;
	System.out.println("Quotient = "+quotient+" and Remainder = "+remainder);
   }
}
```

2.

```
public class cmdQ2
{
   public static void main(String args[])
   {
          int n = Integer.parseInt(args[0]);
          int p = Integer.parseInt(args[1]);
          double power = Math.pow(n,p);
          System.out.println(n+" power "+p+" = "+power);
   }
}
```

3.

```
public class cmdQ3
{
   public static void main(String args[])
   {
          int minR = Integer.parseInt(args[0]);
          int maxR = Integer.parseInt(args[1]);
          int fNumber = (int)(Math.random()*(maxR-minR+1)) + minR;
          int sNumber = (int)(Math.random()*(maxR-minR+1)) + minR;
          int sum = sNumber + fNumber;
          System.out.println("Sum of two random integers "+fNumber+" and "+sNumber+" is
"+sum);
   }
}
```

4.

```
public class cmdQ4
{
   public static void main(String args[])
   {
          double t = Double.parseDouble(args[0]);
          double value = Math.cos(5*t) + Math.sin(7*t);
          System.out.println("Sum value is " + value);
   }
}
```

5.

```
public class cmdQ5
{
   public static void main(String args[])
   {
         int a = Integer.parseInt(args[0]);
         int b = Integer.parseInt(args[1]);
         int c = Integer.parseInt(args[2]);
         int firstNumber = Math.min(Math.min(a,b),c);
         int lastNumber = Math.max(Math.max(a,b),c);
         int middleNumber = (a+b+c) - (firstNumber+lastNumber);
         System.out.println("Ascending order is " + firstNumber+", "+middleNumber+",
"+lastNumber);
   }
}
```

6.

```
public class cmdQ6
{
   public static void main(String args[])
   {
         char ch = args[0].charAt(0);
         System.out.println("ASCII value of " + ch+" is "+(int)ch);
   }
}
```

7.

```
public class cmdQ7
{
   public static void main(String args[])
   {
         int a = Integer.parseInt(args[0]);
         int b = Integer.parseInt(args[1]);
         int c = Integer.parseInt(args[2]);
         boolean val = (a<=b*c?true:(b<=a*c?true:(c<=a*b?true:false)));
         System.out.println(val);
   }
}
```

Home Assignment

1.

```
public class cmdHQ1
{
   public static void main(String args[])
   {
          double principle = Double.parsedouble(args[0]);
          double rate = Double.parsedouble(args[1]);
          double time = Double.parsedouble(args[2]);
          double SI = principle*rate*time/100;
          System.out.println(SI);
   }
}
```

2.

```
public class cmdHQ2
{
   public static void main(String args[])
   {
          double r = Double.parsedouble(args[0]);
          double h = Double.parsedouble(args[1]);
          double area = Math.PI*Math.pow(r, 2) + 2*Math.PI*r*h ;
          System.out.println(“Area = ”+area);
   }
}
```

3.

```
public class cmdHQ3
{
   public static void main(String args[])
   {
           int no = Integer.parseInt(args[0]);
           int lastD = no%10;
           int  firstD = no/1000;
           int sum = lastD + firstD;
          System.out.println(“Sum = ”+sum);
   }
}
```