Q1.

```
import java.util.Scanner;

class Box{
   int depth, length, breadth, km;
   float costperkm;
   Scanner sc = new Scanner(System.in);
   Box(){
      System.out.print("Enter depth, length and breadth : ");
      depth = sc.nextInt();
      length = sc.nextInt();
      breadth = sc.nextInt();

      System.out.println();
      System.out.print("Enter km to travel : ");
      km = sc.nextInt();

      System.out.println();
      System.out.print("Enter per km price : ");
      costperkm = sc.nextFloat();
   }
}


class Boxweight extends Box{
   void totalCost(){
      System.out.println("Total Cost : " + (km * (length*breadth*depth)*costperkm));
   }
}
public class E6Q1 {
   public static void main(String[] args) {
      Boxweight bxwgt = new Boxweight();
      bxwgt.totalCost();
   }
}
```

```
Enter depth, length and breadth : 10 20 30

Enter km to travel : 500

Enter per km price : 2.5
Total Cost : 7500000.0
```

Q2.

```
import java.util.Scanner;

class E6Q2{
   void mul(int a, int b){
      System.out.println("Method for Two numbers called- (Result) - " + a*b);
   }

   void mul(int a, int b, int c){
      System.out.println("Method for Three numbers called- (Result) - " + a*b*c);
   }

   void mul(int[] values, int nItem){
      int a = 1;
      for(int i = 0; i<nItem; i++){
         a = a*values[i];
      }
      System.out.println("Method for Multiple numbers called- (Result) - " + a);
   }
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      boolean t = true;
      int n = 100;
      int[] values = new int[n];
      int x = 0;
      int nItem = 0;

      while(t){
         System.out.print("Enter the number (Press * to stop): ");
         String data = sc.next();

         if(data.equals("*")){
            t = false;
         }
         else{
            values[x] = Integer.parseInt(data);
            x++;
            nItem+=1;
         }
      }

      E6Q2 user = new E6Q2();
      if(nItem == 2){
         user.mul(values[0], values[1]);
      }

      if(nItem == 3){
         user.mul(values[0], values[1], values[2]);
```

```
        }

        if(nItem > 3){
            user.mul(values, nItem);
        }
    }
}
```

```
Enter the number (Press * to stop): 1
Enter the number (Press * to stop): 2
Enter the number (Press * to stop): 3
Enter the number (Press * to stop): *
Method for Three numbers called- (Result) - 6
```

Q3.

```
class Shape {
    public double findArea() {
        return 0; // Default implementation, overridden by subclasses
    }
}

class Square extends Shape {
    private double side;

    public Square(double side) {
        this.side = side;
    }

    @Override
    public double findArea() {
        return side * side;
    }
}

class Rectangle extends Shape {
    private double length;
    private double width;

    public Rectangle(double length, double width) {
        this.length = length;
        this.width = width;
    }

    // @Override
    public double findArea() {
        return length * width;
    }
}

public class E6Q3 {
    public static void main(String[] args) {
        Square square = new Square(5);
        Rectangle rectangle = new Rectangle(4, 6);

        System.out.println("Area of square: " + square.findArea());
        System.out.println("Area of rectangle: " + rectangle.findArea());
    }
}
```

```
Area of square: 25.0
Area of rectangle: 24.0
```

Q4.

```
interface Car {
    public String carname = "";
    public int price = 0;

    public abstract void start();
    public abstract void stop();
    public abstract void running();
}

class Toyota implements Car{

    String carname = "Toyota";
    int price = 1000000;

    public void start(){
        System.out.println("Toyota has started.");
    }

    public void stop(){
        System.out.println("Toyota has stopped.");
    }

    public void running(){
        System.out.println("Toyota is running.");
    }


}

public class E6Q4 {
    public static void main(String[] args) {
        Toyota car = new Toyota();
        System.out.println("Car name : " + car.carname);
        System.out.println("Car price : " + car.price);
        car.start();
        car.start();
        car.running();
    }
}
```

```
Car name : Toyota
Car price : 1000000
Toyota has started.
Toyota has started.
Toyota is running.
```

Q6.

```
class Shape{
   void about(){
      System.out.println("Shape method is called.");
   }
}

class Circle extends Shape{
   void about(){
      System.out.println("Circle class method is called.");
   }
}

public class E6Q5 {
   public static void main(String[] args) {

      Shape s = new Circle();
      s.about();
   }
}
```