

## *CRT*

1.

Members of a class that have been designated as private are encapsulated. Any variables (like radius) that are defined as private in the Circle class are enclosed.

2.

A class's constructor needs to be named the same as the class.

3.

**private:** Only the class in which they are declared can access members that have the private access modifier.

**public:** Individuals who possess the public access modifier are reachable from any location, including outside of the classroom.

4.

```
Circle dot = new Circle(2);
```

```
dot.radius = 5;
```

Since private members cannot be accessed from outside of the class, this statement is illegal if radius is specified as private in the Circle class.

The code is valid if radius is public.

5.

```
public class Roo {
```

```
    private int x;
```

```
    public Roo() {
```

```
        x = 1;
```

```
    }
```

```
public void setX(int z) {  
    x = z;  
}
```

```
public int getX() {  
    return(x);  
}
```

```
public int calculate() {  
    x = x * factor();  
    return(x);  
}
```

```
private int factor() {  
    return(0.12);  
}  
}
```

- a. The name of the class is Roo.
  - b. The name of the data member is x.
  - c. The accessor method is getX().
  - d. The modifier method is setX(int z).
  - e. The helper method is factor().
  - f. The name of the constructor is Roo.
  - g. There are 5 method members: Roo(), setX(int z), getX(), calculate(), and factor().
- 6.

**Class:** An object creation blueprint or template. It outlines the composition and conduct of the class's objects.

**Object:** A class instance. It depicts a real-world entity and is made using the structure specified in the class.<sup>9</sup>

```
public class Moo {  
  
    private double y;  
  
    private static int x;  
  
    private static final z;  
  
}
```

- a) Since the data member z is declared with the final modifier, it is a constant.
- b) Because they are not designated as final, the data members y and x are variables.
- c) Since the data member y is associated with specific class objects and is not declared as static, it is an instance member.
- d) Since the data members x and z are declared as static and are part of the class rather than distinct objects, they are class members.