1. The variable double radius is encapsulated in the Circle class as it has private as the access modifier.

2. Constructors of a class must have the same name of the class.

3. Private class modifiers are used in the declaration of a variable so that it is visible to the class it is in. It is also used for methods that are called on by another method within the same class. Public class modifiers are used to make the the class or method visible to another class. This allows objects to be created from that class.

4. The last statement is invalid due to dot.radius not being a method, specifically the modifier method. In order to change the radius, it would have to be dot.setRadius(5). You cannot change the value of a private variable that exists in another class without using a method.

5a. Roo

b. x

c. public int getX()

d. public void setX(int z)

e. private int factor()

f. Roo

g. 4

6. Classes help create objects as it contains the blueprint of its properties (data members) and behaviours (methods), while objects have actual values for those properties.

9a. private static final z

b. private double y, private static double x

c. private double y

d. private static double x, private static final z