

- 2) Find 10 errors (there are more than 10) in the following Java code. The errors are both syntactic (compiler errors) and logical (bugs). For each error, identify the line number and briefly explain how to fix it.

```
1. private class Circle {
2. public static final float PI = 3.14 ;
3.
4. private double x, y ; /* The center of the circle. */
5. private double r ; /* The radius of the circle. */
6.
7. public Circle(double r) {
8. this(0.0,0.0,this.r) ;
9. }
10.
11.     public double Circle(double x, double y, double r) {
12.     this.x = x ;
13.     this.y = y ;
14.     this.r = r ;
15.
16.     /* Returns the area of the circle. */
17.     public double area() {
18.         return PI * r^2 ;
19.     }
20.
21.     /* Indicates whether a point is on the boundary of the
    circle.
22.     public boolean onCircle(double x1, y1) {
23.         int dx = x1 - x ;
24.         int dy = y1 - y ;
25.         return dx*dx + dy*dy == r*r ;
26.     }
27.
28.     /* Creates a series of concentric circles */
29.     public static void main(string[] args) {
30.         int i ;
31.
32.         for( int i=0 ; i < 10 ; i++ )
33.             Circle c = Circle(10.0*i) ;
34.             System.out.println("r="+c.r+" A="+c.area) ;
35.         }
36. }
```