

```

public class TestClasseAbstraite {

    public static void main(String[] args) {

        Rectangle rect;
        Cercle cerc;

        rect = new Rectangle(9,3,10,20);
        cerc = new Cercle(43,32,100);

        System.out.println("=====");
        System.out.println("Cercle ");
        cerc.afficherPosition();

        System.out.println("Rectangle ");
        rect.afficherPosition();
        cerc.deplacer(66,88);

        System.out.println("Cercle maintenant ");
        cerc.afficherPosition();

        System.out.println("=====");

        System.out.println("Surface cercle : " + cerc.surface());
        System.out.println("Perimetre rectangle : " + rect.perimetre());

    }
}

```

```

public abstract class FormeGeometrique {
    double posX, posY;

    void deplacer(double x,double y) {
        posX=x;
        posY=y;
    }

    void afficherPosition() {
        System.out.println("position : (" + posX + "," + posY + ")");
    }
}

```

```
}
```

```
abstract double surface() ;  
abstract double perimetre() ;
```

```
}
```

```
public class Rectangle extends FormeGeometrique {  
    double largeur, hauteur;  
    public Rectangle() {  
        posX = 0; posY = 0; largeur = 0; hauteur = 0;  
    }  
  
    public Rectangle(double x, double y, double la, double lo) {  
        posX = x; posY = y; largeur = la; hauteur = lo;  
    }  
  
    double surface() {  
        return largeur * hauteur;  
    }  
  
    double perimetre() {  
        return 2*(largeur + hauteur);  
    }  
}
```

```
public class Cercle extends FormeGeometrique {  
    double rayon;  
  
    Cercle(double x, double y, double r) {  
        posX = x; posY = y; rayon=r;  
    }  
  
    double surface() {  
        return Math.PI * Math.pow(rayon, 2.);  
    }  
  
    double perimetre() {  
        return 2 * rayon * Math.PI;  
    }  
}
```