```java
1   import java.util.Scanner;
2   import java.lang.Math;
3
4   abstract class Solid
5   {
6       int side1,side2;
7       abstract void area();
8       abstract void volume();
9   }
10
11  class cylinder extends Solid
12  {
13      cylinder(int h, int r)
14      {
15          side1=h;
16          side2=r;
17          area();
18          volume();
19      }
20
21      void area()
22      {
23          double Area;
24          Area=2*3.14*side2*(side2+side1);
25          System.out.println("The Area of the cylinder is: "+Area);
26      }
27
28      void volume()
29      {
30          double Volume;
31          Volume=3.14*side2*side2*side1;
32          System.out.println("The Volume of the cylinder is: "+Volume);
33      }
34  }
35
```

```java
class cone extends Solid
{
    cone(int h, int r)
    {
        side1=h;
        side2=r;
        area();
        volume();
    }

    void area()
    {
        double Area;
        Area=3.14*side2*(side2+Math.sqrt(side1*side1+side2*side2));
        System.out.println("The Area of the code is: "+Area);
    }

    void volume()
    {
        double Volume;
        Volume=(3.14*side2*side2*side1)/3;
        System.out.println("The Volume of the cone is: "+Volume);
    }
}
class sphere extends Solid
{
    sphere(int r)
    {
        side1=r;
        area();
        volume();
    }

    void area()
    {
```

```java
            volume();
    }

    void area()
    {
        double Area;
        Area=4*3.14*side1*side1;
        System.out.println("The Area of the sphere is: "+Area);
    }

    void volume()
    {
        double Volume;
        Volume=(4*3.14*side1*side1*side1)/3;
        System.out.println("The Volume of the sphere is: "+Volume);
    }
}

class FigureMain
{
    public static void main(String args[])
    {
        cylinder cl=new cylinder(10,15);
        cone cn=new cone(10,20);
        sphere sp=new sphere(10);
    }
}
```