Name :- Aniket Waghmare Roll no : 304D065 Batch:D4

**PROGRAM :**

import java.util.\*;

interface Shape {

double Pi = 3.14;

double area();

double perimeter();

}

class circle implements Shape {

double r;

circle(double r)

{

this.r = r;

}

public double area()

{

return Pi \* r\* r;

}

public double perimeter()

{

return 2 \*(Pi \*r);

}

}

class rectangle implements Shape{

int l, w;

rectangle(int l, int w) {

this.l= l;

this.w = w;

}

public double area()

{

return 2\*l\*w;

}

public double perimeter()

{

return 2 \* (l + w);

}

}

class ellipse implements Shape {

int major, minor;

ellipse(int major, int minor)

{

this.major = major;

this.minor = minor;

}

public double area()

{

return Pi \* major \* minor;

}

public double perimeter()

{

return Pi \*(major + minor);

}

}

class Exp9 {

public static void main(String args[]) {

circle c1 = new circle(10);

c1.area();

c1.perimeter();

rectangle r1 = new rectangle(10, 20);

r1.area();

r1.perimeter();

ellipse e1 = new ellipse(20, 30);

e1.area();

e1.perimeter();

System.out.println("AREa of circle is "+c1.area());

System.out.println("perimeter circle is "+c1.perimeter());

System.out.println("Area rectangle is "+r1.area());

System.out.println("perimeter reactangle is "+r1.perimeter());

System.out.println("Area ellipse is "+e1.area());

System.out.println("perimeter ellipse is"+e1.perimeter());

}

}

***OUTPUT :***

AREa of circle is 314.0

perimeter circle is 62.800000000000004

Area rectangle is 400.0

perimeter reactangle is 60.0

Area ellipse is 1884.0000000000002

perimeter ellipse is157.0