```java
import java.util.Scanner;
public class MathPractice {
    public static void main(String[] args) {
        Scanner sc = new scanner(System.in);
System.out.println("Equation 1: Calculate the height
of a right triangle.");
System.out.print("Enter base(b): ");
double b = sc.nextDouble();
System.out.print("Enter angle: ");
double theta = sc.nextDouble();
double height = b * Math.tan(Math.toRadians(theta));
System.out.println("Height : "+ height);

System.out.println("Equation 2: Compound interest
calculation:");

System.out.print("Enter principal: ");
double p = sc.nextDouble();
System.out.print("Enter Annual interest rate: ");
double n = sc.nextDouble();
System.out.print("Enter number of compounds
per year");
```

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int n = sc.nextInt();
double t = sc.nextDouble();
double A = p * Math.pow(1+ r/n, n*t);
System.out.println("Total Amount:"+A);

System.out.println("Equation 3: Convert cartesian to
    polar coordinates.");
System.out.print("Enter x:");
double x = sc.nextDouble();
System.out.print("Enter y:");
double y = sc.nextDouble();
double rpolar = Math.sqrt(Math.pow(x,2)+Math.pow(y,2));
double thetaPolar = Math.toDegrees(Math.atan2(y,x));
System.out.print("Radius: "+ rpolar + " Angle "+theta
    + " ");
System.out.println("Equation 4: Distance calculate);
System.out.print("Enter x1 : ");
double x1 = sc.nextDouble();
System.out.print("Enter y1 : ");
double y1 = sc.nextDouble();
```

```java
System.out.print("Enter x2: ");
double x2 = sc.nextDouble();
System.out.print("Enter y2: ");
double y2 = sc.nextDouble();
double distance = Math.sqrt((Math.pow(x2-x1,2)
 + Math.pow(y2-y1,2)));
System.out.println("Distance: " + distance);

System.out.println("Equations: solve quadratice
equation);
System.out.print("Enter coefficient a: ");
double a = sc.nextDouble();
System.out.print("Enter coefficient b: ");
double b = sc.nextDouble();
System.out.print("Enter coefficient c: ");
double c = sc.nextDouble();
double discriminent = Math.pow(b,quad.2)-4*a*c;
```

```java
if (discriminant >= 0) {
    double root1 = (-bread + Math.sqrt(discriminant)) / (2*a);
    double root2 = (-bread - Math.sqrt(discriminant)) /
                    2*a):
    System.out.print(" Roots : " root1 +" Roots " + root2 ");
}
if (root1 >= 0 && root2 >= 0) {

    System.out.println("smallest positive root : " +
        Math.min(root1, root2)); }
else if (root1 > 0) {
System.out.println(" smallest positive root:"+root1);
}

else {

    System.out.println("No roots : ");

}

sc. close();

}

}
```