```java
public static void main(String[] args){


//        input from user

    Scanner input = new Scanner(System.in);




                                    //VARIABLES




    int L1 = input.nextInt;()

    int L2 = input.nextInt;()

    int theta  = input.nextInt;()

    int theta1 = input.nextInt;()

    int theta2 = input.nextInt;()

    int X_val = input.nextInt;()

    int Y_val = input.nextInt;()
```

convert the math equation task.

How to convert the Equation ? I will show you the prosses for all this equation

$$X = L1 \cos \emptyset 1 + L2 \cos (\emptyset 1 + \emptyset 2)$$

$$Y = L1 \sin \emptyset 1 + L2 \sin(\emptyset 1 + \emptyset 2)$$

inverse kinematic

$$\cos\emptyset 2 = X^2 + Y^2 - L1^2 - L2^2 / 2\, L1\, L2$$

$$\emptyset 1 = \Theta - \emptyset 2$$

//Equations

```
//      θ1 = θ - θ2

        theta1 = (theta - theta2);


//      J = L2 sinθ2

        int J = Math.multiplyExact(L2, (int) Math.sin(theta2)) ;


//      K = L1 + L2 Cosθ2

        int K = ((L1) + Math.multiplyExact(L2, (int) Math.cos(theta2))) ;


//      H^2 = X^2 + Y^2

        double H_alwtr = (Math.pow(X_val, 2)) + (Math.pow(Y_val, 2)) ;


//      (L1 * L2) >> L1 L2

        int Multi = Math.multiplyExact(L1, L2) ;


* 2 //      (L1 * L2) >> 2 L1 L2

        int Multiply2 = Math.multiplyExact(2, Multi) ;
```

//Forward kinamatic

```java
//      X = L1 Cos θ1 + L2 Cos(θ1+θ2)

int X_muqabel = (Math.multiplyExact(L1, (int) Math.cos(theta1)) + (Math.multiplyExact(L2, (int) Math.sin(theta1 + theta2))));


//      Y = L1 Sin θ1 + L2 Sin(θ1+θ2)

int Y_mujawer = (Math.multiplyExact(L1, (int) Math.sin(theta1)) + (Math.multiplyExact(L2, (int) Math.cos(theta1 + theta2))));
```

//Inverse kinematic

```java
//      Cosθ2 = X^2 + Y^2 - L1^2 - L2^2 / 2 L1 L2

double CosTheta2 = ((Math.pow(X_val, 2) + Math.pow(Y_val, 2)) - (Math.pow(L1, 2) - Math.pow(L2, 2))) / (Multiply2);



}
```