

Ans 1

```
import java.util.Scanner;

class Division {

    public static void main(String[] args) {

        int a, b, result;

        Scanner input = new Scanner(System.in);
        System.out.println("Input two integers");

        a = input.nextInt();
        b = input.nextInt();

        // try block

        try {
            result = a / b;
            System.out.println("Result = " + result);
        }

        // catch block

        catch (ArithmeticException e) {
            System.out.println("Exception caught: Division by zero.");
        }
    }
}
```

Ans 2:

```
public class Triangle {  
  
    private int side1; private  
    int side2; private int  
    side3;  
  
    public Triangle(int side1, int side2, int side3)  
    { if (side1 <= 0 || side2 <= 0 || side3 <= 0) throw new IllegalArgumentException(  
                                                "Sides can only be positive numbers");  
  
        this.side1 = side1;  
        this.side2 = side2;  
        this.side3 = side3;  
    }  
  
    public int getSide1() { return  
        side1;  
    }  
  
    public void setSide1(int side1) { this.side1 =  
        side1;  
    }  
  
    public int getSide2() { return  
        side2;  
    }  
  
    public void setSide2(int side2) { this.side2 =  
        side2;  
    }  
  
    public int getSide3() { return  
        side3;  
    }  
}
```

```
}
```

```
public void setSide3(int side3) { this.side3 =  
    side3;
```

```
}
```

```
public boolean isValidTriangle(){
```

```
    if ((side1 + side2 > side3) && (side1 + side3 > side2) && (side3 + side2 > side1))  
        return true;
```

```
        else
```

```
            return false;
```

```
    }
```

```
public String getTriType() throws Exception { if (isValidTriangle())
```

```
    if ((side1 == side2) && (side2 == side3)) return "equilateral";
```

```
    else if ((side1 == side2) || (side1 == side3) || (side2 == side3))
```

```
        return "isosceles";
```

```
    else
```

```
        return "scalene";
```

```
        else
```

```
            throw new Exception("The sides don't form a valid triangle.");
```

```
    }
```

```
}
```