

```
import stdlib.Stdout;
import stdlib.StdRandom;
public class Die implements Comparable<Die> {
    private int value; // the face value
    // Constructs a die.
    public Die() {
        value = 0;
    }
    // Rolls this die.
    public void roll() {
        value = StdRandom.uniform(1,7);
    }
    // Returns the face value of this die.
    public int value() {
        return value;
    }
    // Returns true if this die is the same as other, and false otherwise.
    public boolean equals(Object other) {
        if (other == this) {
            return true;
        }
        if (other == null) {
            return false;
        }
        if (other.getClass() != this.getClass()) {
            return false;
        }
        Die that = ((Die) other);
        return this.value == that.value;
    }

    // Returns a comparison of this die with other, by their face values.
    public int compareTo(Die that) {
        return (this.value - that.value);
    }

    // Returns a string representation of this die.
    public String toString() {
        if (value == 0) {
            return "Not rolled yet";
        }
        String[] faces = {
```

```

        "\n * \n ",
        "* \n \n *",
        "* \n * \n *",
        "* *\n \n* *",
        "* *\n * \n* *",
        "* * *\n \n* * *",
    };

};

return faces[value - 1];
}

// Unit tests the data type. [DO NOT EDIT]
public static void main(String[] args) {
    int x = Integer.parseInt(args[0]);
    int y = Integer.parseInt(args[1]);
    int z = Integer.parseInt(args[2]);
    Die a = new Die();
    a.roll();
    while (a.value() != x) {
        a.roll();
    }
    Die b = new Die();
    b.roll();
    while (b.value() != y) {
        b.roll();
    }
    Die c = new Die();
    c.roll();
    while (c.value() != z) {
        c.roll();
    }
    StdOut.println("Dice a, b, and c:");
    StdOut.println(a);
    StdOut.println(b);
    StdOut.println(c);
    StdOut.println("a.equals(b)      = " + a.equals(b));
    StdOut.println("b.equals(c)      = " + b.equals(c));
    StdOut.println("a.compareTo(b) = " + a.compareTo(b));
    StdOut.println("b.compareTo(c) = " + b.compareTo(c));
}
}

```