We have used the *Die* object in a few of our examples. It is just a normal die:

Create a new subclass of the Die class called *WildDie*.
- A *WildDie* behaves like a regular die in every regard except when it is rolled.
- If a *WildDie* roll results in the maximum value (i.e. 6 on a six sided die, 10 on a ten sided die) it is rerolled and added onto.
- For example (with a six sided die):
  - First roll is a 3 returns 3
  - Second roll is a 6, and rerolled a 4 returns 10
  - Third rolle is a 6, and rerolled a 6, and rerolled a 2 returns 14

Note: In Java constructors are not inherited, you will need to create a corresponding constructor for each in the die class and map it to the matching constructor in the super class.
import java.util.Random;

/**
 * The Die class represents a die of variable sides, and
 * can be rolled to return a random value.
 * @author Michael J. Holmes
 * @version 2.0 Jan 8, 2015.
 */
public class Die {
    // Instance Variables
    private int numSides;
    private int currentValue;
    private Random myRandomNumGenerator;

    //Constructors
    /**
     * Default constructor creates a 6-sided die.
     */
    public Die(){
        numSides = 6;
        myRandomNumGenerator = new Random();
        currentValue = this.roll();
    }

    /**
     * This constructor takes in a single integer value and create a die with
     * that number of sides.
     * @param aNumSides Number of sides to create on the die.
     */
    public Die(int aNumSides){
        numSides = aNumSides;
        myRandomNumGenerator = new Random();
        currentValue = this.roll();
    }

    //Class Methods
    /**
     * Getter for the number of sides on the die.
     * @return The number of sides on the die.
     */
    public int getNumOfSides() {
        return numSides;
    }

    /**
     * Getter for the die’s current value.
     * @return The die’s current value.
     */
    public int getCurrentValue() {
        return currentValue;
    }

    /**
     * Rolls the die to get a random value.
     * @return A random value between 1 and the number of sides.
     */
    public int roll() {
        currentValue = myRandomNumGenerator.nextInt(numSides) + 1;
        return currentValue;
    }
}