

# Lesson 1 Problem Set

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*Compiled on* Sunday 10<sup>th</sup> July, 2016 at 14:13

**Do these problems for additional practice and challenge.**

1. The modulus operator in Java is used to find the remainder of a division. This operator takes the form of % in Java with an example usage of `int remainder = dividend % divisor`. For example,  $13\%5 = 3$ .

Use the knowledge learned in the first lesson, write the code in the given outline to simulate the modulus operator:

```
public class Modulus {  
  
    public static void main(String[] args) {  
        int dividend = 52;  
        int divisor = 10;  
        int remainder = 0;  
  
        //Write code here...  
  
        //This should print out "2"  
        System.out.println(remainder);  
    }  
}
```

2. **Challenge:** Create a variable that will round off decimals. For example, if I input 10.5, it should round up to 11. Similarly, if the input is 10.3, it should round down to 10. This question may require looking into a concept known as casting which was not covered in the first lesson, but is easy to understand if you understand the difference between a `double` and a `int`.

```
public class Rounder{

    public static void main(String[] args){

        double value_to_round = 15.2;
        int rounded_value;

        //Insert Code Here....

        //Should print out 15
        System.out.println(rounded_value);

    }

}
```