Homework 1: Basic Math Operations

Write a simple program, showing that you understand basic math operations in Java. The type of program you write does not matter. It can concern cats, cars, biology, sociology, or anything else you can imagine. However, it must contain the math operations given below, and it must print the results out in a human-sensical way.

The class will be called `BasicMath`. Hence, the program file should be called `BasicMath.java`, and it should compile to a file called `BasicMath.class`. Every line of your program should be inside the `main()` function, like we have written in class:

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

        (code goes here...)

    }
}
```

For both ints and doubles, you must perform:

- addition (`+`)
- subtraction (`-`)
- multiplication (`*`)
- division (`/`)

For booleans, you must perform:

- and (`&&`)
- or (`||`)
- not (`!`)

Thus, there are <u>eleven</u> operations total that you must demonstrate.

Also remember that style counts! Give each of your variables names that are both sensical and descriptive. Use comments to document your code.

As an example, the beginning of your output might look something like this:

```
A rectangle's sides are of length 4 cm and 6 cm.
The total perimeter is 20 cm.
The long side is 2 cm longer than the short side.
The total area is 24 square cm.
The average side has length 5 cm.
```

(The numbers printed here are all variables.)