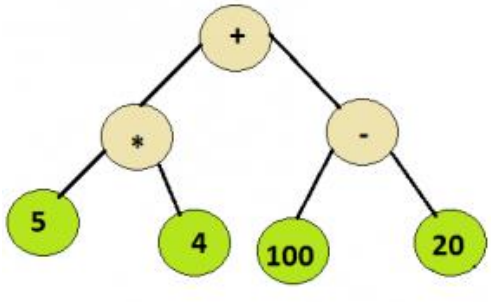
Homework 1

In this homework you will complete the missing part in the Operator.java code (Operator class).

Operator class has 2 modes:

1) Keeps a double value but no sub child. So, for an *operator* object, *operator.getValue();* method call will return this double value.

2) Keeps 2 sub children and an operator type. For a multiplication *operator* object, *leftChild.getValue() * rightChild.getValue();* method call will return multiplication of the values of the 2 child. If these children have their own children, then they will do the same thing.



In the above tree, there are 6 Operator objects: a multiplication operator object, an addition operator object, and subtraction operator object, and 4 leaf nodes with their stored double values. Here, root operator object is the addition operator objects.

Below is an example of 5 test cases. In these examples, below code line is executed for each tree (rootOperator is the root of the tree):

```
rootOperator + " = " + rootOperator.getValue();
```

```
-1.0 = -1.0
(0.0 - (-0.5)) = 0.5
((-4.5 + 1.0) * (3.5 + 1.0)) = -15.75
(-5.0 + (-Infinity)) = -Infinity
((2.0 / 3.5) * (1.5 - NaN)) = NaN
```

You will only submit Operator.java file. Submission with any other file type will directly get zero.