



Challenge 3: Design a Calculator

Test your problem-solving skills in this difficult challenge.

We'll cover the following

- Problem statement
 - test function
 - Sample input
 - Sample output
- Coding exercise

Problem statement#

The aim of this challenge is to design a calculator that takes operands in its input and performs one of the following operations on them:

- Addition
- Subtraction
- Multiplication
- Division

test function#

You have to write a function test that takes two values of type double and one value of type char in its input parameters.



- number1 and number2 take the values of the operands.
- operate can take +, -, *, and / in its value.
 - If the value of operate is +, then it should call the function that adds the values of number1 and number2 and returns the result in the output.
 - If the value of operate is —, then it should call the function that subtracts the value of number2 from number1 and returns the result in the output.
 - If the value of operate is *, then it should call the function that multiplies the value of number1 by number2 and returns the result in the output.
 - If the value of operate is /, then it should call the function that divides the value of number1 by number2 and returns the result in the output.
 - For any other value of operate, it should return -1 in the output.

Sample input#

```
test(7.9 , + , 6.2 )
test(7.9 , - , 6.2 )
test(7.9 , * , 6.2 )
test(7.9 , / , 6.2 )
test(7.9 , = , 6.2 )
```

Sample output#





```
14.100000
1.700000
48.980000
1.274194
-1.000000
```

Coding exercise#

Before diving directly into the solution, try to solve it yourself. Then, check if your code passes all the test cases.

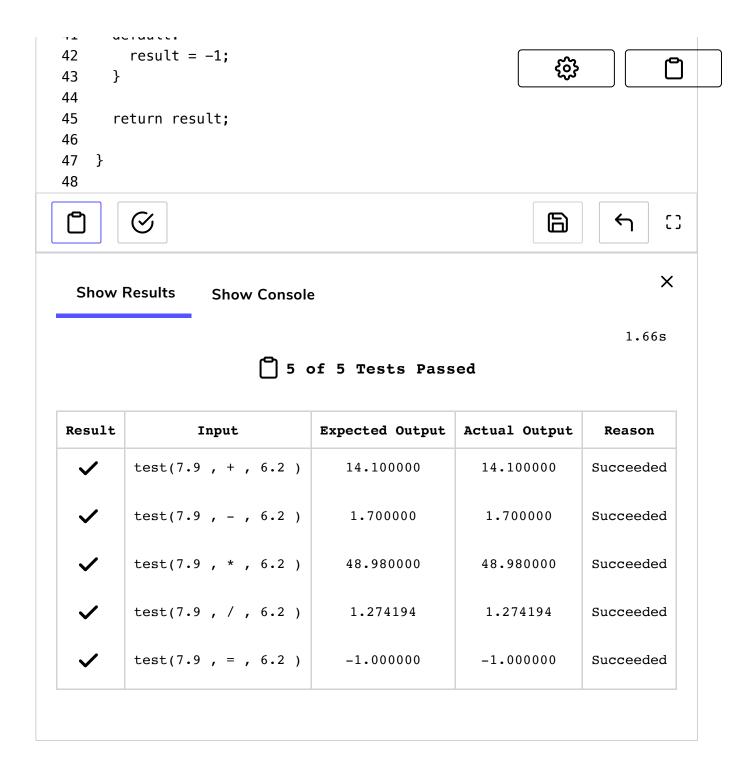
Your function name should be test.

Good luck! 👍

41

default:

```
21
    double test(double number1, char operate, double number2) {
      double result;
22
23
24
      switch (operate) {
      case '+':
25
        result = add(number1, number2);
26
27
        break;
28
29
      case '-':
30
        result = subtract(number1, number2);
31
        break;
32
33
      case '*':
        result = multiply(number1, number2);
34
35
        break;
36
37
      case '/':
        result = divide(number1, number2);
    <sup>/learn</sup>break;
40
```



S Great! You have just designed the calculator.

In case you are stuck, go over the solution review in the next lesson.



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