

## Logic-1: sortaSum

Given 2 ints, a and b, return their sum. However, sums in the range 10..19 inclusive, are forbidden, so in that case just return 20.

```
public int sortaSum(int a, int b) {  
  
}
```

### Step 1

As usual, declare a variable of the same type as the return type of the method.

Call the variable **sum**.

Normally, you would initialize **sum** to some negative/no answer – like 0.

```
public int sortaSum(int a, int b) {  
    int sum = 0;  
    return sum;  
}
```

### Step 2

However, the question tells us immediately that the default value is simply the sum of the two integers a and b (*Given 2 ints, a and b, return their sum*). We'll therefore change the first line.

```
public int sortaSum(int a, int b) {  
    int sum = a + b;  
    return sum;  
}
```

### Step 3

Time to add the if statement. The question says *in that case just return 20*.

```
public int sortaSum(int a, int b) {  
    int sum = a + b;  
    if () {  
        sum = 20;  
    }  
    return sum;  
}
```

### Step 4

The condition for the if statement asks us to look for sums between 10 and 19: *sums in the range 10..19 inclusive*.

```
public int sortaSum(int a, int b) {  
    int sum = a + b;  
    if (10 <= sum && sum <= 19) {  
        sum = 20;  
    }  
    return sum;  
}
```

### Step 5

Done! Notice that we could have also written this condition using **a + b** rather than **sum**.

Although this works, notice the duplication! It's always better to use a shorter descriptive variable (sum) than to repeat expressions (a + b) that need to be calculated over and over again.

```
public int sortaSum(int a, int b) {  
    int sum = a + b;  
    if (10 <= a + b && a + b <= 19) {  
        sum = 20;  
    }  
    return sum;  
}
```