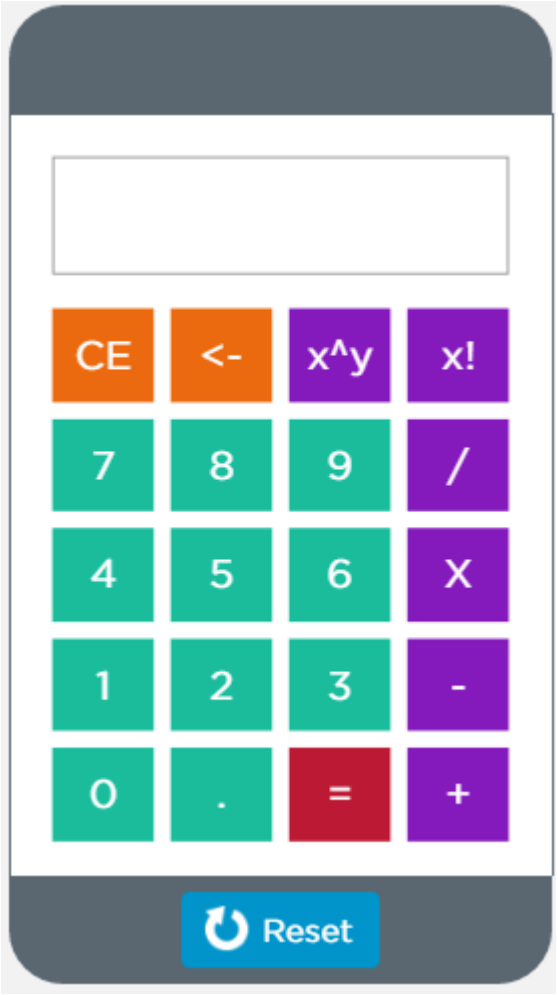
# B6 Calculator




Make this screen.

I highly recommend Duplicate for the buttons.

The textbox is named “screen”.

The buttons are named as follows:

| | | | |
|---|---|---|---|
| bclear | bBackSpace | bExp | bfact |
| b7 | b8 | b9 | bdivide |
| b4 | b5 | b6 | bmultiply |
| b1 | b2 | b3 | bminus |
| b0 | bdec | bequals | bplus |

Start with these two global variables:

```
var total = -1;
var sign = "+";
```

Code the number buttons 0 to 9 first. b1 is here:

```
onEvent("b1", "click", function(event) {
  setText("screen", getText("screen")+"1");
});
```

Run your program:
Numbers should appear in the textbox as you click them.
None of the other buttons will work.

The Decimal button works exactly the same way.

```
onEvent("bdec", "click", function(event) {
  setText("screen", getText("screen")+".");
});
```

Make a function to calculate the new total based on the sign the user has created.

```
function calculate() {
  if (sign=="+") {
    total = total + getNumber("screen");
  } else if (sign=="-") {
    total = total - getNumber("screen");
  } else if (sign=="*") {
    total = total * getNumber("screen");
  } else if (sign=="/"){
    total = total / getNumber("screen");
  }
}
```

Make a function to handle the first number (it's strange):

```
function signUpdate() {
  if (total==-1) {
    total = getNumber("screen");
  } else {
    calculate();
  }
  setText("screen","");
}
```

For each of the buttons for *, +, -, /, make their onEvent:

```
onEvent("bplus", "click", function(event) {
  signUpdate();
  sign = "+";
});
```

The sign, at the bottom, needs to be changed to be -, +, * or / depending on the button.

Code the equals button:

```
onEvent("bequals", "click", function(event) {
  calculate();
  setText("screen", total);
  total = -1;
});
```

Run your code. You should be able to add, subtract, multiply, divide and press the equals button. The answers should be correct.

Code the clear button:

```
onEvent("bclear", "click", function(event) {
  total = -1;
  setText("screen","");
});
```

Code the backspace button:

```
onEvent("bBackSpace", "click", function(event) {
  var current = getText("screen");
  var newNum = current.substring(0, current.length-1);
  setText("screen", newNum);
});
```

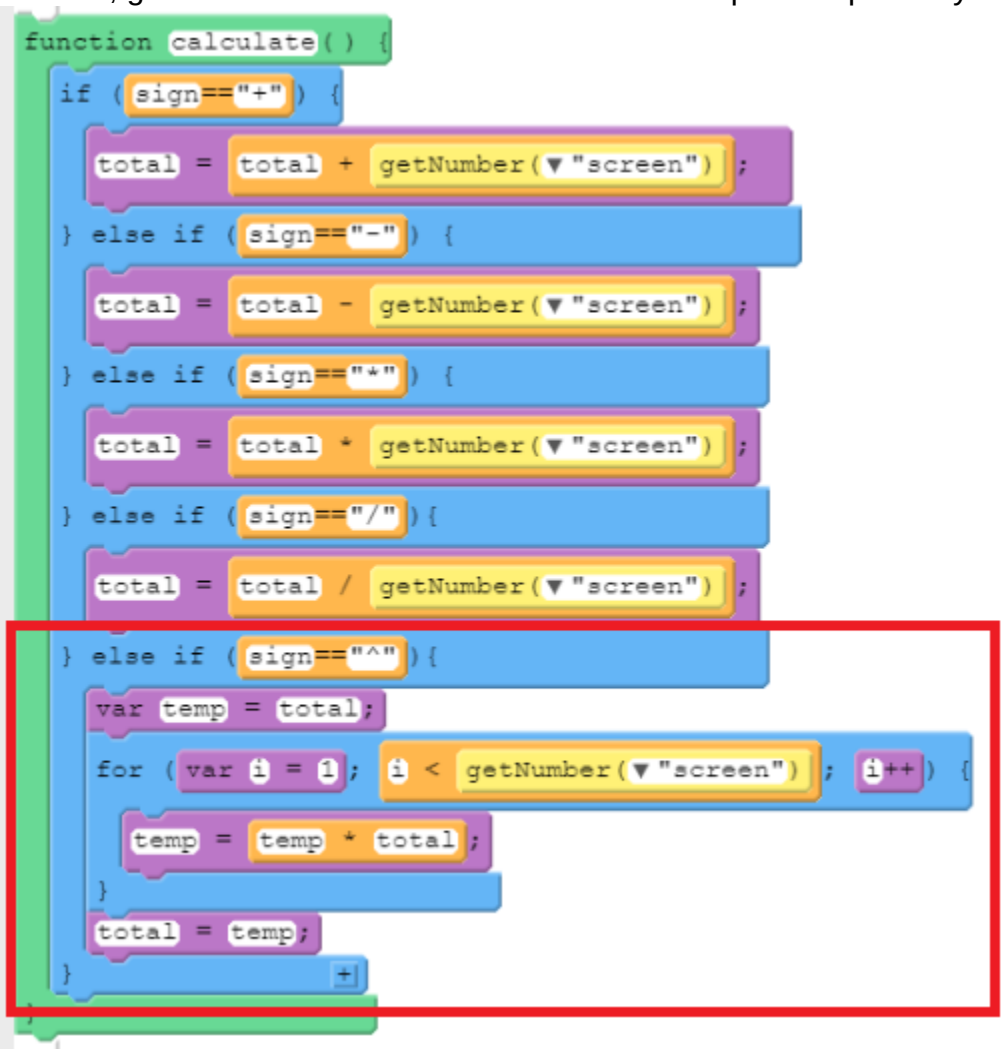
Run your code.

Everything (except these two buttons: x^y x!) should be working.

x^y To code the power button, you need a loop.
First, do the easy part and set up the button:

```
onEvent("bExp", "click", function(event) {
  signUpdate();
  sign = "^";
});
```

Second, go to the calculate method and add the loop that repeatedly calculates the exponent.




Run your code. Verify it is working.


The factorial function also requires a loop.
It is a one-step function, so it will not need the calculate method.

Factorial is a math function that works like this:

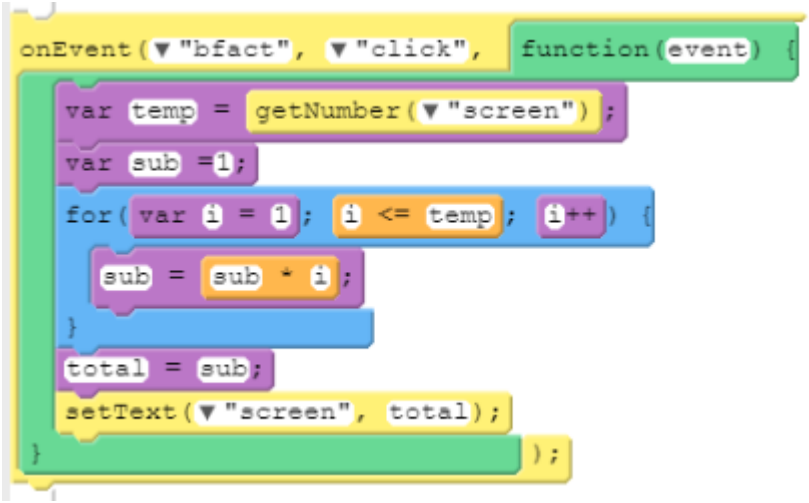
| | |
|---|---|
| 1! = 1 | = 1 |
| 2! = 1 x 2 | = 2 |
| 3! = 1 x 2 x 3 | = 6 |
| 4! = 1 x 2 x 3 x 4 | = 24 |
| 5! = 1 x 2 x 3 x 4 x 5 | =120 |

If you type:


,

it should give you:


The code is like this:




At that point, everything should be working. Try it out.