

To do math

1) Make an input where the data can come in. Give it an id.

```
<input id="in">
```

2) Make an input where you can put the answer. Give it a different id.

```
<input id="out">
```

3) Set up your code to run when you want the math to happen.

Here it happens when they click a button.

```
<input type=button onclick="one()">
```

Here it happens as they type on the input field. This is a replacement for the code on step 1.

```
<input id="in" onkeyup="one()">
```

4) Make a function with the same name from step 3 that does the math.

Here it just doubles the number.

```
function one()
{
    document.getElementById("out").value = 2 * document.getElementById("in").value
}
```

=====

```
<html>
  <head>
    <script language=javascript>
      function one()
      {
        document.getElementById("out").value = 2 * document.getElementById("in").value
      }
    </script>
  </head>
  <body>
    <form>
      <input id="in"><br>
      <input id="out"><br>
      <input type=button onclick="one()" value="Click me to double the top number">
    </form>
  </body>
</html>
```

To make an alert box

- 1) Figure out where in the code you want the alert box to happen.
- 2) Use the code as shown below. Be sure to use quotation marks

```
alert("this is the message")
```

```
=====
<html>
  <head>
    <script language=javascript>
      function one()
      {
        alert("This is the message")
      }
    </script>
  </head>
  <body>
    <form>
      <input type=button onclick="one()" value="Click me for an alert box">
    </form>
  </body>
</html>
```

To change something's background color ...

1) Give that thing an id, for example "thing"

```
<input id="thing">
```

2) Figure out where in the code you want the color to change. Here, I want it to change when the button gets clicked.

3) Put the code below at that place.

```
document.getElementById("thing").style.background = "red"
```

```
=====
<html>
  <head>
    <script language=javascript>
      function blue()
      {
        document.getElementById("thing").style.background = "blue"
      }
      function green()
      {
        document.getElementById("thing").style.background = "green"
      }
    </script>
  </head>
  <body>
    <form>
      <input id="thing">
      <input type=button onclick="blue()" value="Click me to turn it blue">
      <input type=button onclick="green()" value="Click me to turn it green">
    </form>
  </body>
</html>
```

To make text visible or invisible

1) Make the thing to turn visible or invisible into a span or div. Below, I use a div.

```
<div>This is the text.</div>
```

2) Give the span or div and id, here I use "message".

```
<div id="message">This is the text.</div>
```

3) Figure out where in the code you want the text to change.

4) If you want the thing to start hidden, use the following bit of CSS in the div or span.

```
style="visibility:hidden"
```

5) To turn it visible, use the code

```
document.getElementById("message").style.visibility = "visible"
```

6) To turn it hidden, use the code

```
document.getElementById("message").style.visibility = "hidden"
```

```
=====
<html>
  <head>
    <script language=javascript>
      function visible()
      {
        document.getElementById("message").style.visibility = "visible"
      }
      function hidden()
      {
        document.getElementById("message").style.visibility = "hidden"
      }
    </script>
  </head>
  <body>
    <form>
      <div id="message" style="visibility:hidden">
        This message is sometimes visible, and sometimes not.
      </div>
      <input type=button onclick="visible()" value="Click to make it visible">
      <input type=button onclick="hidden()" value="Click to make it invisible">
    </form>
  </body>
</html>
```

If Statements

Hints:

Only use an if statement when **sometimes** something should happen.

Use == for equality. Never use =. Don't use one "=", use two.

```
=====
<html>
  <head>
    <script language=javascript>
      function one()
      {
        if (document.getElementById("input").value < 10)
        {
          alert("That's below 10.")
        }
      }
    </script>
  </head>
  <body>
    <form>
      <input id="input">
      <input type=button onclick="one()" value="Click me to check">
    </form>
  </body>
</html>
```

If Else Statements

Hints:

Only use an if-else if you have exactly two choices.

Use == for equality. Never use =. Don't use one "=", use two.

Don't put more conditions after the else.

BAD:
else (document.getElementById("input").value < 10)
GOOD:
else

```
=====
<html>
  <head>
    <script language=javascript>
      function one()
      {
        if (document.getElementById("input").value < 10)
        {
          alert("That's below 10.")
        }
        else
        {
          alert("That's not below 10.")
        }
      }
    </script>
  </head>
  <body>
    <form>
      <input id="input">
      <input type=button onclick="one()" value="Click me to check">
    </form>
  </body>
</html>
```

If -Else If – Else Statements

Hints:

Only use an if-else if-else if you have three or more choices.

Use == for equality. Never use =. Don't use one "=", use two.

Order matters. Javascript checks the first thing first, and the second thing second.

You can have as many else-if's as you want.

Don't put more conditions after the else.

BAD:

```
else (document.getElementById("input").value < 10)
```

GOOD:

```
else
```

```
<html>
  <head>
    <script language=javascript>
      function one()
      {
        if (document.getElementById("input").value < 10)
        {
          alert("That's below 10")
        }
        else if (document.getElementById("input").value == 10)
        {
          alert("You used a 10")
        }
        else
        {
          alert("That's above 10")
        }
      }
    </script>
  </head>
  <body>
    <form>
      <input id="input">
      <input type=button onclick="one()" value="Click me to check">
    </form>
  </body>
</html>
```