

Announcements

- **Project #2 has been posted**
- **Term Paper assignment will be posted soon**
- **First exam is on Monday 10/9 (One week from now).**

Return Quizzes

- **Listen for your group....**
- **Let's go over the answers quickly**

Clarification about “innerHTML”

```
<p id="myPar"></p>
```

```
<script>  
    myPar.innerHTML="GEORGE";  
</script>
```

- Doesn't re-write your code
- Changes what user sees

Slightly different output technique

```
<div id="outputArea"></div>
```

```
<script>
```

```
    var output = "some stuff";
```

```
    output += "some more stuff";
```

```
    output += "even more stuff";
```

```
    myPar.innerHTML = output.
```

```
</script>
```

Example: [Input2.html](#)

Type Conversions

Usually JavaScript automatically converts things:

```
string1 = "40";
```

```
string2 = "30";
```

```
product = string1 * string2; // works
```

It doesn't always work out...

Example: [NumberConversion1.html](#)

Type Conversions

To convert from string to number:

```
“40”           // This is a String (text)
Number(“40”)   // This is the number 40
```

Always Use Number function when prompting for a numerical value. (We should fix the “Input” example!)

```
var size = Number(prompt(“Enter size: ”));
```

Example: [NumberConversion2.html](#)

More Math...

There are lots of built-in math functions.

Examples:

- `result = Math.abs(-7); // result will be 7`
- `result = Math.max(3, 23); // result will be 23`
- `result = Math.min(3, 23); // result will be 3`
- `result = Math.sqrt(16); // result will be 4`
- `result = Math.PI; // 3.1415926...`
- `result = Math.random(); // result will be a
// random value
// between 0 and 1`

Comparisons and Boolean Variables

Comparison Operators

These work as you would expect:

$x < y$

$x > y$

$x \leq y$

$x \geq y$

These are “boolean expressions” (either true or false)

Equality Operators

Checking for equality is confusing

There are TWO equality operators:

`x == y` true if x and y evaluate to the same value

`x === y` true if x and y are the same TYPE and also evaluate to the same value

We strongly favor using `===` (You'll see why later...)

Example:

```
x = 5;
```

```
y = "5";
```

```
x == y    // this is true
```

```
x === y   // this is false
```

Equality Operators

Two more operators:

$x \neq y$ opposite of $x == y$
 $x \neq\equiv y$ opposite of $x \equiv\equiv y$

Example: [Comparisons.html](#)

If-Statement

Behavior depends on a “condition”...

Simple Example:

```
x = Number(prompt("Enter first value: "));  
y = Number(prompt("Enter second value: "));  
if ( x < y ) {  
    alert("THE FIRST VALUE WAS SMALLER");  
}  
alert("That was fun.");
```

[Example: IfStatements.html](#)