Announcements

• Do your term paper!
• Project #3 is due tonight
• Project #4 has been posted
• Friday will be practice, but you don’t need a computer
Review

- Let’s go over exercise from last class (Whack-A-Mole)
Manipulating Arrays

Caution:

Arrays are very different in other languages!
In particular, Java arrays are very different from JavaScript arrays.
Making an array bigger

```javascript
var a = [3.99, "Joe", 95];
```

<table>
<thead>
<tr>
<th>777</th>
<th>3.99</th>
<th>&quot;Joe&quot;</th>
<th>95</th>
<th>&quot;Cat&quot;</th>
</tr>
</thead>
</table>

**unshift** -- adds element to front  
**push** -- adds element to back

```javascript
a.unshift(777);
```

```javascript
a.push("Cat");
```
Making an array smaller

```
var a = [3.99, "Joe", 95];
```

| 3.99 | "Joe" | 95 |

**shift** -- removes element from front

```
var y = a.shift();
```

**pop** -- removes element from back

```
var x = a.pop();
```

Example: Arrays4.html
Using Splice to Remove from Middle

var a = [777, 3.99, "Joe", 95, "Cat"];

To remove 2 items from position #1...

a.splice(1, 2);
Using Splice to Insert Into Middle

```javascript
var a = [777, 3.99, "Joe", 95, "Cat"];

777  3.99  "Joe"  95  "Cat"

777  3.99  "Fish"  22.7  "Joe"  95  "Cat"
```

To insert some items at position #2...

```javascript
a.splice(2, 0, "Fish", 22.7);
```

Example: Splice.html