m * n = m/2 * 2n

  8 * 12
= 4 * 24
= 2 * 48
= 1 * 96

.

```
m * n = m//2 * 2n w/ leftover

  9 *  12   ---> 12
= 4 *  24
= 2 *  48
= 1 *  96   ---> 96
= 0 * 192
.
```

Until today, every data value we have used in the course has been
immutable

Even when we created a local "variable", we assigned a value to it <u>exactly once</u>.

.

imperative programming

.

(+ 1 2)

.

Sequencing only matters when expressions have side effects.

Side effects only matters when expressions are in sequence.

.

state

name -- value -- location

Defining a name
and
**changing the value
of a named object**
are different activities.

They should be different operations
in the language.

.

In C++:

```
Foo a = new Foo();
```

versus:

```
Foo a;
a = new Foo();
```

.

set!