```
cout << 13 / 4 << "\n";
    //prints 3

cout << 13 / 4.0 << "\n";
        //prints 3.25

cout << 13 / (double) 4 << "\n";
```

Datatypes + expressions review:

Expression examples:

- 6
- 7.0
- 'a'
- "abc"
- x (say declared as int x;)
- x + 6
- x * x
- ⋮

Non-examples:

- (

All expressions have a datatype + a value. (almost always)

```
int x, y;
double d;
```

datatype of x+y is int.

x+d is double

(x=y) is an expression!

Value will be the

same as y.

Boolean expressions: true/false values.

```
bool a,b;

a && b      // logical AND
a || b      // logical OR
!a          // negation: true ⇄ false
```

can also form boolean expr's from arithmetic:

```
int x,y;
 :
(x == y)    // true ⟺ if x equals y
(x < y)
(x > y)
(x <= y)
(x >= y)
(x != y)
```

Note: integer types (int, char, long, size_t)
can be interpreted as boolean expressions
using the convention

0 ≡ false

everything else ≡ true

(bool) 7 ≡ true
(bool) 0 ≡ false.