Scratch Data Types

DEFINITION
A data type is a set of **values** and a set of **operations** on those values.

Scratch has three primitive data types: strings, numbers, and booleans.
For each, list some example values and operations.

strings	**numbers**	**booleans**
example values: 1. 2. 3. example operations: 1. 2. 3.	example values: 1. 2. 3. example operations: 1. 2. 3.	example values: 1. 2. example operations: 1. 2. 3.

Try some experiments. What happens if you:

1. use string operations with number values? For example
    a. `join` a word and a number
    b. `join` two numbers
    c. `length` of a number
2. use boolean operations with string values? For example
    a. compare (`>` or `<` or `=`)
        i. give two examples that produce a `true` value
            1.
            2.
        ii. give two examples that produce a `false`
            1.
            2.
3. use number operations with boolean values? For example
    a. `(5 > 10) - (10 > 5)` (false - true)
    b. `(2 > 1) + (2 > 1)` (true + true)

Hypothesize:

1. How does Scratch know whether to treat a number like a number or a string?

2. Why do you think Scratch won't let you enter a word for inputs for math operations (e.g., `+` or `round`)?

3. What's happening when you compare two string values? (see experiment 2a above)

4. What's happening when you subtract or add boolean values (see experiment 3)? How could you confirm your hypothesis?