

# Week 1 Exercises

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Please complete all exercises below WITHOUT using any libraries/packages.

## Exercise 1

Assign 10 to the variable x. Assign 5 to the variable y. Assign 20 to the variable z.

*#your code below*

## Exercise 2

Show that x is less than z but greater than y.

**Note:** your output must be a **SINGLE** boolean, do not output a boolean for each expression.

*#your code below*

## Exercise 3

Show that x and y do not equal z.

**Note:** your output must be a **SINGLE** boolean, do not output a boolean for each expression.

*#your code here*

## Exercise 4

Show that the formula  $x + 2y = z$ .

**Note:** your output must be a **SINGLE** boolean

*#your code below*

## Exercise 5

I have created a vector (`test_vector`) of integers for you. Determine if any of `x`, `y`, or `z` are in the vector.

**Note:** your output must be a **SINGLE** boolean, do not output a boolean for each expression.

```
test_vector <- c(1,5,11:22)
#your code below
```

## Exercise 6

Show which value is contained in the test vector. To do this you will need to create an element-wise logical vector using operators. `x == vector`. Once you have done that you will need to use slicing to return all indices that have matches. **Note:** your output should be two integers

```
#your code below
```