Exercises-1: Intro to R - Logical vectors

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Before you start, enter the following code to assign sample data set

```
data <- mtcars
```

1. Use logical operators to output only those rows of data where column `mpg` is between 15 and 20 (excluding 15 and 20).

2. Use logical operators to output only those rows of data where column `cyl` is equal to 6 and column am is not 0.

3. Use logical operators to output only those rows of data where column `gear` or `carb` has the value 4.

4. Use logical operators to output only the even rows of data.

5. Use logical operators and change every fourth element in column `mpg` to 0.

6. Output only those rows of data where columns `vs` and `am` have the same value 1, solve this without using `==` operator.

7. `(TRUE + TRUE) * FALSE`, what does this expression evaluate to and why?

8. Output only those rows of `data` where at least `vs` or `am` have the value 1, solve this without using `==` or `!=`.

9. Explain the difference between `|` , `||` , `&` and `&&`.

10. Change all values that are 0 in the column `am` in `data` to 2.

11. Add 2 to every element in the column `vs` without using numbers.

12. Output only those rows of `data` where `vs` and `am` have different values, solve this without using `==` or `!=`. HINT: see `xor()`

[https://www.r-exercises.com/2015/11/25/logical-vectors-and-operators/]