

# Using loops in R

Brad Duthie

23 January 2019

# What is a loop?

**A loop repeats the same set of instructions (i.e., 'code') across a particular set of conditions**

# What is a loop?

**A loop repeats the same set of instructions (i.e., 'code') across a particular set of conditions**

Suppose you want to print the following sequence:

$1, \frac{1}{2}, 3, \frac{1}{4}, \dots, 999, \frac{1}{1000}$

# What is a loop?

**A loop repeats the same set of instructions (i.e., 'code') across a particular set of conditions**

Suppose you want to print the following sequence:

$1, \frac{1}{2}, 3, \frac{1}{4}, \dots, 999, \frac{1}{1000}$

How would you do it in R (without a loop)?

# What is a loop?

**A loop repeats the same set of instructions (i.e., 'code') across a particular set of conditions**

Suppose you want to print the following sequence:

$1, \frac{1}{2}, 3, \frac{1}{4}, \dots, 999, \frac{1}{1000}$

How would you do it in R (without a loop)?

How would you explain what you want to do (verbally)?

# What is a loop?

**A loop repeats the same set of instructions (i.e., 'code') across a particular set of conditions**

Suppose you want to print the following sequence:

$1, \frac{1}{2}, 3, \frac{1}{4}, \dots, 999, \frac{1}{1000}$

How would you do it in R (without a loop)?

How would you explain what you want to do (verbally)?

1. For each integer from 1 to 1000
2. If the number is odd, print it
3. If the number is even, divide by the number then print it
4. Stop when when finished printing