# Lesson 1 Exercises

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Let's do some practice problems to challenge your understanding.

1. Calculate the average (`mean()`) and standard deviation (`sd()`) of the `speed` column in the `cars` dataframe.
2. Create a new column in the dataframe `cars` called `time` defined as `dist/speed`
3. A Fibonacci sequence is a series of numbers in which each number is the sum of the two preceding numbers (1, 1, 2, 3, 5, 8, ...). Write a function `fibonacci()` that takes one argument `n`, the size of the sequence you want to print and outputs a Fibonacci sequence of that length. To make this easier, you can assume that the user always properly implements this function (they always provide an n of 1 or greater).

   Extra credit: Have the function handle cases for all numeric values of n and notify the user of an error i.e. if n <= 0 is given.

   *Hint*: Intialize a vector using `numeric(n)` to store your sequence, and have your function *return* the vector.