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4. For loops in MATLAB
For loops (External resource) (1.0 points possible)

Using for loops in MATLAB

In the last problem, you used MATLAB to compute one Fourier coefficient. But what if we want to compute the first 100 Fourier coefficients? We definitely don't want to type out 100 separate computations. Instead, we will use a for loop to write one computation and let MATLAB handle the iterations!

How do for loops work in MATLAB? Let's look at an example of a simple for loop that prints the numbers 1 through 10.

```matlab
for k = 1:10  % the index k is varies from 1 to 10 (incremented by 1 each loop)
    k         % we do not include a semicolon because we want the value of k to print
end           % after the loop has run through all of the index values, the for loop ends
```

Try creating a bit of code below that stores the even numbers between 2 and 20 in a vector called evenNumbers.

If you have more questions, don't hesitate to checkout the documentation (https://www.mathworks.com/help/matlab/ref/for.html?s_tid=doc_ta)!

Script ❓

💾 Save   C Reset   📖 MATLAB Documentation (https://www.mathworks.com/help/)

```matlab
1  % Initialize the vector evenNumbers to be all zeros
2  evenNumbers=zeros(1,10);
3  % Use a for loop to save the kth *even* number between 2 and 20
4  % to the kth entry of the vector evenNumbers
5  for k = 1:10
6      evenNumbers(k) = 2*k;
7  end
```
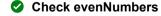
▶ Run Script   ❓

Assessment: All Tests Passed   Submit   ❓

✅ **used for loop**

✅ **Check evenNumbers**

Output   ✏️

```
Code ran without output.
```

4. For loops in MATLAB

Topic: Unit 1: Fourier Series / 4. For loops in MATLAB

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💬 doubt

Hi there, I´m new using Matlab, so there are some things that I don't know yet haha, I've got a problem in the for loop because when I use the command linspace for let k be ...

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