

MATLAB For Loop Indexing

We will program several loops to just see what happens with the index using a simple script file. Open a new m-file and start with the simple header below. Save as LoopTest.m

```
% Program LoopTest
% This is a quick script file to look at what various loop
% indexing approaches do. Each loop simply echo prints the loop index
```

1. For loop with simple indexing: Set up the simple loop below in your script, save it and then run the file by typing “LoopTest” at the command prompt.

```
x=5;
for k=1:x
    k
end
```

What are the different values taken on by k?

For each step that follows, changes to the code are shown in red.

2. A for loop with step indexing: Now modify the loop by changing the part in red below. Run your loop again. What values of k does it take on? Why isn't 14 one of the values you see?

```
x = 14
for k=1:3:x
    k
end
```

3. A for loop with vector indexing: Modify the loop again with the values shown in red below. How does the loop perform in this case?

```
x = [200,400,260,600]
for k=x
    k
end
```

4. A for loop with 2-D array indexing: Add the values shown in red below to the x vector, be sure to include the semicolon as shown. What happens to the loop index in this case?

```
x=[200,400,260,600 ; 300,500,120,200]
for k=x
    k
end
```