# Lab5

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# Problem 1

```
for i = 1:10
    d = pi * i;
    fprintf('%i times pi is %f\n',i,d);
end
```

```
1 times pi is 3.141593
2 times pi is 6.283185
3 times pi is 9.424778
4 times pi is 12.566371
5 times pi is 15.707963
6 times pi is 18.849556
7 times pi is 21.991149
8 times pi is 25.132741
9 times pi is 28.274334
10 times pi is 31.415927
```

# Problem 2

```
%Function in file called farenheit2celsius.m
farenheit2celsius(20);
```

```
020.00 Farenheit is -06.67 Celsius.
```

# Problem 3

```
for i = -10:10:100
    farenheit2celsius(i);
end
```

```
-10.00 Farenheit is -23.33 Celsius.
000.00 Farenheit is -17.78 Celsius.
010.00 Farenheit is -12.22 Celsius.
020.00 Farenheit is -06.67 Celsius.
030.00 Farenheit is -01.11 Celsius.
```

```
040.00 Farenheit is 004.44 Celsius.
050.00 Farenheit is 010.00 Celsius.
060.00 Farenheit is 015.56 Celsius.
070.00 Farenheit is 021.11 Celsius.
080.00 Farenheit is 026.67 Celsius.
090.00 Farenheit is 032.22 Celsius.
100.00 Farenheit is 037.78 Celsius.
```

# Problem 4

```
%Function in file called average.m
x = rand(100,1);
average(x)
mean(x)
```

```
ans =

    0.4291


ans =

    0.4291
```

# Problem 5

```
%Function is in file called deviation.m
x = randn(100,1);
deviation(x)
std(x)
```

```
ans =

    1.0217


ans =

    1.0217
```

# Problem 6

```
A = rand(4,4);
x = rand(4,1);
matvecmult(A,x)
A * x
```

```
ans =

    1.6258
    0.8449
    0.6833
    1.1323


ans =

    1.6258
    0.8449
    0.6833
    1.1323
```

# Problem 7

```
A = rand(5,3);
B = rand(3,5);
matmatmult(A,B)
A * B
```

```
ans =

    1.7490    0.9757    1.5644    0.7617    0.2651
    0.4240    0.2005    0.4518    0.2807    0.0834
    1.1440    0.7399    1.2111    0.5653    0.1886
    0.6663    0.2344    0.5873    0.4106    0.1237
    1.3316    1.1884    1.7164    0.6174    0.2160


ans =

    1.7490    0.9757    1.5644    0.7617    0.2651
    0.4240    0.2005    0.4518    0.2807    0.0834
    1.1440    0.7399    1.2111    0.5653    0.1886
    0.6663    0.2344    0.5873    0.4106    0.1237
    1.3316    1.1884    1.7164    0.6174    0.2160
```

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