

1. (1.5 points). What is the output of the following MATLAB statements?

```
x = 1:3;
y = 3:-1:1;
z = sum( x.*y - min(x)*max(y) )
```

$$x = [1 \ 2 \ 3]$$

$$y = [3 \ 2 \ 1]$$

$$x.*y = [3 \ 4 \ 3]$$

$$\min(x) = 1 = \min([1 \ 2 \ 3])$$

$$\max(y) = 3 = \max([3 \ 2 \ 1])$$

$$z = 1$$

$$z = x.*y - \min(x)\max(y) = [3 \ 4 \ 3] - 3 = [0 \ 1 \ 0]$$

$$\text{sum}([0 \ 1 \ 0]) = 1$$

2. (1.5 points) What is the output of the following MATLAB statements?

```
x = 32; for i = 1:4, x=x/2; end; y=x
```

$$x = 32$$

$$i=1, x = \frac{32}{2} = 16$$

$$i=2, x = \frac{16}{2} = 8$$

$$i=3, x = \frac{8}{2} = 4$$

$$i=4, x = \frac{4}{2} = 2$$

$$y = x = 2$$

$$y = 2$$

3. (2 points) Write down a series of MATLAB commands that you would use to find the average value of the first 100 non-zero integers.

$$\text{Sum of first } N \text{ integers} = \frac{N(N+1)}{2}$$

$$\text{average} = \frac{\text{sum}}{\#}$$

$$z = (100+1)/2;$$

OR

$$z = \text{sum}([1:100])/100$$