

ENGR 0012 – Spring 2019
HW 2

Acceptable behaviors for this assignment include:

- Consulting your textbook or other written material
- Asking your team members
- Asking your professor or TA

Note that consulting materials and asking others is only acceptable as long as they do not provide you with the solutions – you have to come to the solution on your own!

Unacceptable behaviors for this assignment include:

- Copying the solution(s) from a solution manual, book, other written material, or from other students
- Copying the solutions(s) from assignments submitted in previous semesters
- Providing the solutions to a classmate, student in other section, student in future section, or online solution banks
- Asking someone to complete the assignment for you

Please copy this sentence in the line below: “I, (your name), certify that I have completed this assignment in an honest manner.”

This is an individual Assignment. Each member of the group must complete the assignment. Using Matlab answer the following questions and record the solutions below

1. What is $((9+3-2*4)/3)^8+4/5^{(2*3-4+7*2)/9}$
2. What is $\log_{10}(7)$ and $\ln(7)$
3. What is 3^6 and e^3
4. Let $\theta = 44$ radians and $\beta = 44$ degrees, what is $\sin(\theta)$ and $\cos(\beta)$?
5. What is the value of 3.4, 4.6, -2.3 and -2.8 using the following functions: $\text{ceil}(x)$, $\text{fix}(x)$, $\text{floor}(x)$, $\text{round}(x)$
6. Given $x = [4 \ 2 \ 1 \ 3]$ and $y = 5$, what is the result of $x \wedge y$?
7. Given $x = [4 \ 2 \ 1 \ 3]$ and $y = 5$, what is the result of $x \wedge y$?

8. Given $x = [4 \ 2; 1 \ 0]$ and $y = [1 \ 2; 3 \ 4]$, what is the result of $\max(x, y)$?

9. The following information is in the variable data

```
Data =
     2     3     4     7
     1     1     0     9
     4     2     3     1
```

Write the Matlab commands that will set the following 3 variables equal to the indicated portion of data:

$$\mathbf{Y} = \begin{Bmatrix} 4 \\ 0 \\ 3 \end{Bmatrix}$$

$$\mathbf{Z} = \begin{bmatrix} 1 & 0 & 9 \\ 2 & 3 & 1 \end{bmatrix}$$

$$\mathbf{S} = [2 \ 3 \ 1]$$

What is $\text{sum}(\mathbf{Z})$?

What is $\mathbf{Y} * \mathbf{S}$?

10. Given A, B and C, determine the result of the following.

$$\mathbf{A} = \begin{bmatrix} 3 & -2 & 1 \end{bmatrix} \quad \mathbf{B} = \begin{bmatrix} 4 & 7 & 2 \end{bmatrix} \quad \mathbf{C} = \begin{bmatrix} -2 \\ -5 \\ -6 \end{bmatrix}$$

$$\mathbf{A} * \mathbf{C} =$$

$$\mathbf{A} - \mathbf{B} =$$

$$3 * \mathbf{A} =$$

$$\mathbf{A} .* \mathbf{B} =$$

$$\mathbf{B} .^{\wedge} \mathbf{A} =$$

$$\mathbf{B} * \mathbf{C} =$$

This is an individual assignment. Please submit a hard copy in class on the due date.