

Name _____

Let

$$\mathbf{A} = \begin{bmatrix} 3 & 2 \\ -5 & 4 \end{bmatrix}, \quad \mathbf{B} = \begin{bmatrix} 1 & 0 \\ 3 & 1 \end{bmatrix}.$$

1. Compute the product $\mathbf{A} * \mathbf{B}$.

Answer:

$$\mathbf{A} * \mathbf{B} = \begin{bmatrix} 9 & 2 \\ 7 & 4 \end{bmatrix}$$

2. Find \mathbf{x} if $\mathbf{B}\mathbf{x} = [1, -5]^T$. (The superscript T denotes transpose.)

Answer:

$$\mathbf{x} = \begin{bmatrix} 1 \\ -8 \end{bmatrix}$$

3. Using the matrix \mathbf{A} from above, what is the output of the following MATLAB code?

```
t = 0;
for i=1:2
    t1 = abs(A(1,i)) + abs(A(2,i));
    t = max(t, t1);
end
t
```

Answer: The result is 8.