Inspiring Greatness

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

College Algebra

May 18, 2020

College Algebra
Lesson: May 18, 2020

Objective/Learning Target:
Students will apply algebra to matrix elements.

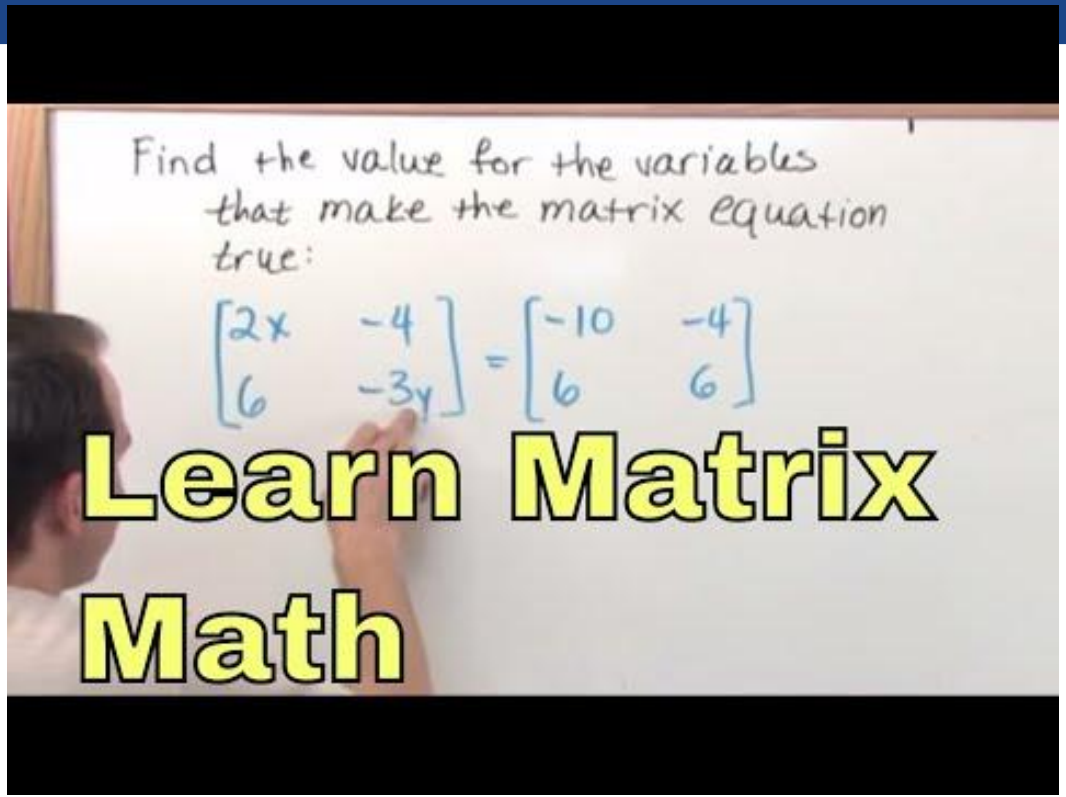
Warm Up Activity:

Work through multiplying scalars to a matrix

Multiplying Scalars into Matrices

Lesson:

Watch part of this video on how simple matrix algebra. We encourage you to have your own sheet of paper out and work along with the video.



Practice:

1. $$\begin{bmatrix} a & b-2d \\ -3 & 2b \\ a+c & 7 \end{bmatrix} = \begin{bmatrix} 5 & 1 \\ -3 & 6 \\ 4 & 7 \end{bmatrix}$$

2. Given that the following matrices are equal, find the values of x, y, and z.

$$A = \begin{bmatrix} 4 & 0 \\ 6 & -2 \\ 3 & 1 \end{bmatrix} \qquad B = \begin{bmatrix} x & 0 \\ 6 & y+4 \\ \frac{z}{3} & 1 \end{bmatrix}$$

Practice:

3. Given that the following matrices are equal, find the values of x and y.

$$A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \qquad B = \begin{bmatrix} x & 2 \\ 3 & y \end{bmatrix}$$

Practice ANSWERS:

1. a=5,b=3,c=-1,d=1
2. x=4,y=-6,z=9
3. x=1,y=4

Additional Practice: Solve the Matrix Equation for *x* & *y*

1) $$2\begin{bmatrix} 1 & 5 \\ 3 & -2 \end{bmatrix} - \begin{bmatrix} -2 & 1 \\ 1 & -3 \end{bmatrix} = \begin{bmatrix} x & 9 \\ 5 & y \end{bmatrix}$$

2) $$2\begin{bmatrix} x & -3 \\ 1 & 2 \end{bmatrix} - 3\begin{bmatrix} 4 & -2 \\ -1 & y \end{bmatrix} = \begin{bmatrix} -4 & 0 \\ 5 & -5 \end{bmatrix}$$

Additional Practice Answers:

1) $x = 4 \quad y = -1$

2) $x = 4$ & $y = 3$