

<u>Help</u>

sandipan_dey >

<u>Course</u> <u>Progress</u> <u>Dates</u> <u>Calendar</u> <u>Discussion</u> <u>Notes</u>

☆ Course / Unit 4: Matrices and Linearization / Problem Set A

()

Next >

1. Hidden matrix

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< Previous</pre>

Problem Set A due Sep 15, 2021 20:30 IST



Practice

Matrix 1

1/1 point (graded)

Suppose variables y_1,y_2 depend on x_1,x_2 as:

$$y_1 = -x_1 - 3x_2 (5.160)$$

$$y_2 = -7x_1 (5.161)$$

Find the matrix M such that $egin{pmatrix} y_1 \ y_2 \end{pmatrix} = M egin{pmatrix} x_1 \ x_2 \end{pmatrix}$.

(Enter a matrix using notation such as [[a,b],[c,d]].)

$$M =$$
 [[-1,-3],[-7,0]]

✓ Answer: [[-1, -3],[-7, 0]]

Solution:

We recognize y_1 and y_2 to be "a number times x_1 " plus "a number times x_2 ". These numbers make up the matrix.

Submit

You have used 1 of 3 attempts

1 Answers are displayed within the problem

Matrix 2

1/1 point (graded)

Suppose variables y_1, y_2, y_3 depend on x_1, x_2, x_3 as:

$$y_1 = -2x_1 (5.162)$$

$$y_2 = -7x_1 - 5x_2 - 7x_3 (5.163)$$

$$y_3 = -7x_1 + 6x_2 - 3x_3 (5.164)$$

Find the matrix M such that $egin{pmatrix} y_1 \ y_2 \ y_3 \end{pmatrix} = M egin{pmatrix} x_1 \ x_2 \ x_3 \end{pmatrix}$.

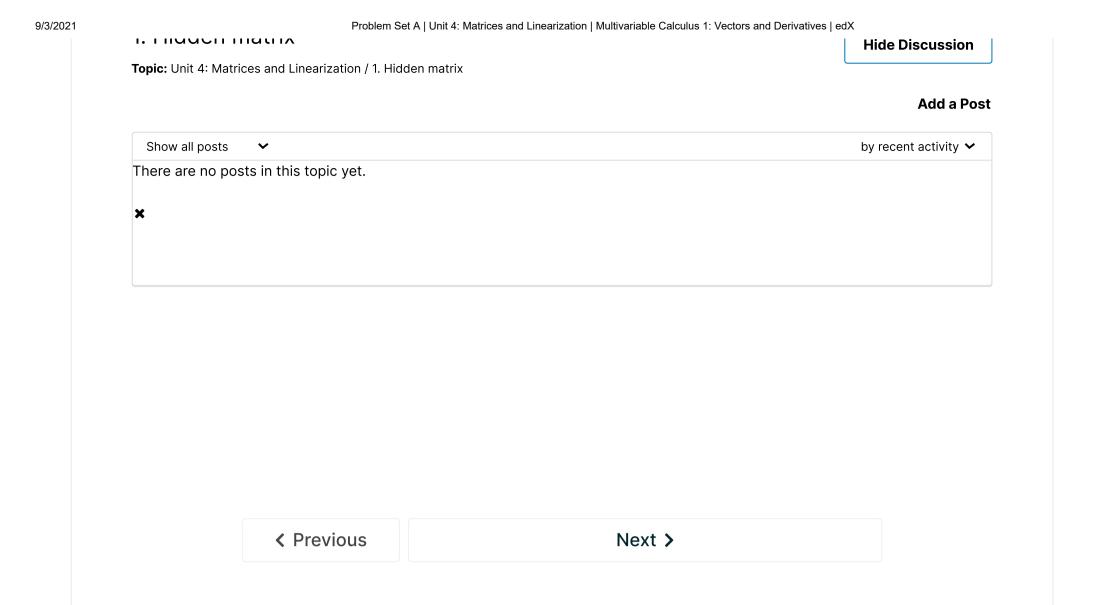
(Enter a matrix using notation such as [[a,b],[c,d]].)

$$M = [[-2,0,0],[-7,-5,-7],[-7,6,-3]]$$

Submit

You have used 1 of 3 attempts

✓ Correct (1/1 point)



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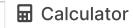
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