

Lab 6 Assessment

Due 6 Nov at 6:00 **Points** 4 **Questions** 4
Available 25 Oct at 6:00 - 6 Nov at 6:00 **Time limit** None
Allowed attempts 3

This quiz was locked 6 Nov at 6:00.

Attempt history

	Attempt	Time	Score
LATEST	Attempt 1	9,551 minutes	4 out of 4

⚠️ Answers will be shown after your last attempt

Score for this attempt: 4 out of 4
Submitted 5 Nov at 14:57
This attempt took 9,551 minutes.

Question 1

1 / 1 pts

Find a value of x for which the following vectors are linearly dependent?
[2 -2 4], [4 -6 7], [-2 2 x]

☐ 3

☒ -4

☐ -7/2

☐ -7/3

Question 2**1 / 1 pts**

True or false: The columns of any 4×5 matrix are linearly dependent.

☒ True

☐ False

Question 3**1 / 1 pts**

With T defined by $T(\mathbf{x}) = A\mathbf{x}$, find a vector \mathbf{x} whose image under T is \mathbf{b} .

$A = \begin{bmatrix} 1 & 0 & -2 \\ -2 & 1 & 6 \\ 3 & -2 & -5 \end{bmatrix}$, $\mathbf{b} = \begin{bmatrix} -1 \\ 7 \\ -3 \end{bmatrix}$

☒ $\begin{bmatrix} 3 \\ 1 \\ 2 \end{bmatrix}$

☐ $\begin{bmatrix} 3 \\ 1 \\ 1 \end{bmatrix}$

☐ $\begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}$

☐ None of the above

Question 4**1 / 1 pts**

How many rows and columns must a matrix A have in order to define a mapping from \mathbb{R}^5 into \mathbb{R}^7 by the rule $T(\mathbf{x}) = A\mathbf{x}$?

☒ 7 rows, 5 columns

☐ 5 rows, 7 columns

☐ 5 rows, 4 columns

☐ 4 rows, 2 columns

Quiz score: **4** out of 4