



## Welcome to this course

The relationship between machine learning, linear algebra, and vectors and matrices

✓ **Video:** Motivations for linear algebra  
3 min

✓ **Video:** Getting a handle on vectors  
9 min

✓ **Practice Quiz:** Exploring parameter space  
7 questions

✓ **Practice Quiz:** Solving some simultaneous equations  
5 questions

## Vectors

✓ **Video:** Operations with vectors  
11 min

📋 **Practice Quiz:** Doing some vector operations  
7 questions

## Summary

**Congratulations! You passed!**

TO PASS 80% or higher PRACTICE QUIZ • 30 MIN

Keep Learning

GRADE

100%

## Doing some vector operations

## Doing some vector operations

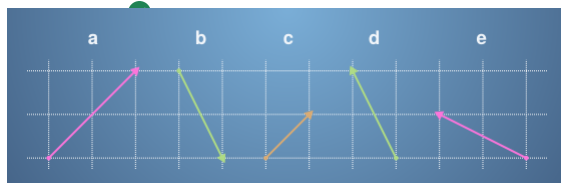
TOTAL POINTS 7

1. This aim of this quiz is to familiarise you with vectors and some basic vector operations.

1 / 1 point

Try again

For the following questions, the vectors **a**, **b**, **c**, **d** and **e** refer to those in this diagram:



Grade

100%

View Feedback

We keep your highest score



The sides of each square on the grid are of length 1. What is the numerical representation of the vector **a**?

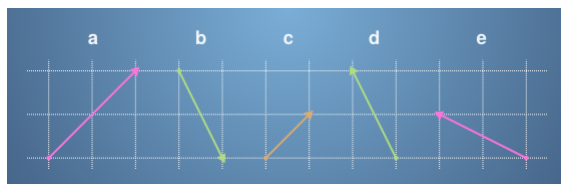
- ☒  $\begin{bmatrix} 2 \\ 2 \end{bmatrix}$
- ☐  $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$
- ☐  $\begin{bmatrix} 1 \\ 2 \end{bmatrix}$
- ☐  $\begin{bmatrix} 2 \\ 1 \end{bmatrix}$

✓ **Correct**

You can get the numerical representation by following the arrow along the grid.

2.

1 / 1 point



Which vector in the diagram corresponds to  $\begin{bmatrix} -1 \\ 2 \end{bmatrix}$ ?

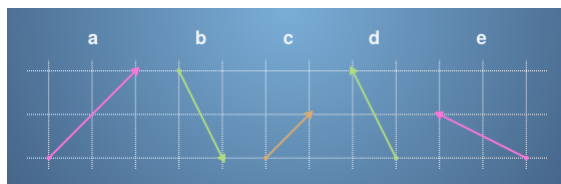
- ☐ Vector **a**
- ☐ Vector **b**
- ☐ Vector **c**
- ☒ Vector **d**

✓ **Correct**

You can get the numerical representation by following the arrow along the grid.

3.

1 / 1 point



What vector is  $2\mathbf{c}$ ?

Please select all correct answers.

☒ **a**

✓ **Correct**

Multiplying by a positive scalar is like stretching out a vector in the same direction.

