

Vector algebra

Linear transformations

- ✓

Video:

Matrices as linear transformations

3 min
- ✓

Video:

Linear transformations as matrices

1 min
- ✓

Linear Transformations

15 min
- ▶

Video:

Matrix multiplication

4 min
- ▶

Video:

The identity matrix

1 min
- ▶

Video:

Matrix inverse

3 min
- ▶

Video:

Which matrices have an inverse?

1 min
- ▶

Video:

Neural networks and matrices

8 min
- ▶

Video:

Conclusion

30 sec
- 📋

Quiz:

Vector and Matrix Operations, Types of Matrices

8 questions

Ungraded Labs

Programming Assignment: Single Perceptron Neural Networks for Linear Regression

Lecture Notes

This is an ungraded tool to develop your understanding of the material. You can change the values in the fields below or adjust positions of the vectors on the plots to visualize various linear transformations.

Transformation matrix:

Vectors to transform:

Result of transformation:

3

1

1

2

$v_1 = \begin{bmatrix} 1 \\ 0 \end{bmatrix}$

$v_2 = \begin{bmatrix} 0 \\ 1 \end{bmatrix}$

$v_1 = \begin{bmatrix} 3 \\ 1 \end{bmatrix}$

$v_2 = \begin{bmatrix} 1 \\ 2 \end{bmatrix}$

Standard Transformations:

Choose from the list...

Animation:

slow

medium

fast

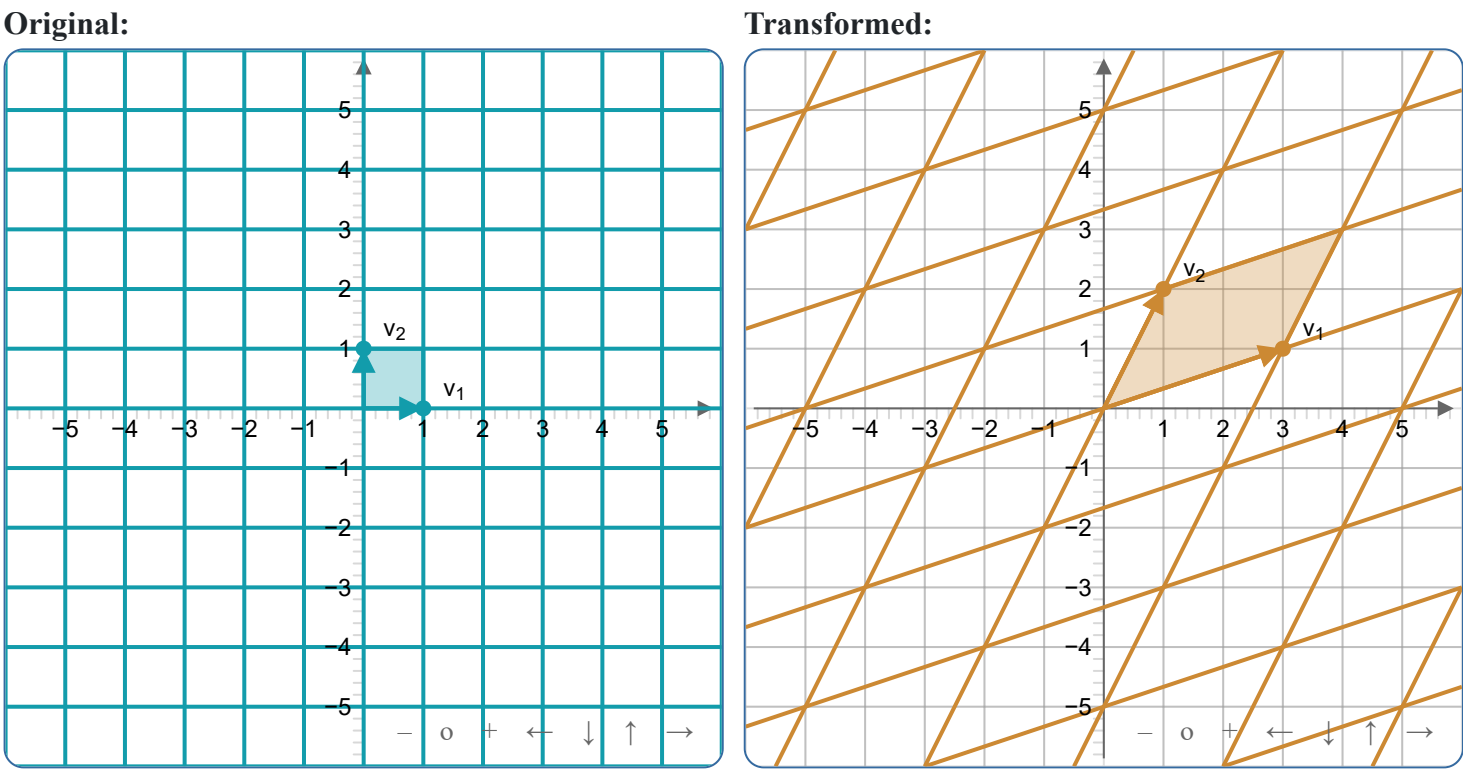
none

Show:

☒ grid

☒ vectors

☐ image



Expand

Complete

Go to next item

