

MIT MATHLETS

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MATRIX VECTOR

The product of a matrix and a vector depends in interesting ways on the entries of each. Eigenvectors represent a coincidence of direction.

- Mathlet
- Description
- Comments

MATRIX VECTOR

mode + help

1.00

10

y

5

0

-5

-10

x

-10

-5

0

5

10

Input vector

$v = \begin{bmatrix} 1.00 \\ 1.00 \end{bmatrix}$

Output vector

$Av = \begin{bmatrix} 2.00 \\ 1.00 \end{bmatrix}$

$A = \begin{bmatrix} \begin{array}{ccccc} -6 & -3 & 0 & 3 & 6 \\ \hline & & & & \end{array} & 1.0 \\ \begin{array}{ccccc} -6 & -3 & 0 & 3 & 6 \\ \hline & & & & \end{array} & 1.0 \end{bmatrix}$

☐ Show eigenlines

☐ Show eigenvalues

☐ Show eigenvectors

0

1

2

3

4

5

6

7

8

r

0


$\pi/2$

π

$3\pi/2$

2π

θ



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https://mathlets.org/mathlets/matrix-vector/

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