



LINEAR ALGEBRA

WHAT IS LINEAR ALGEBRA?

Overview

linear algebra, mathematical discipline that deals with vectors and matrices and, more generally, with vector spaces and linear transformations. Unlike other parts of mathematics that are frequently invigorated by new ideas and unsolved problems, linear algebra is very well understood.

METHOD OF SUBSTITUTIONS

STEP 1

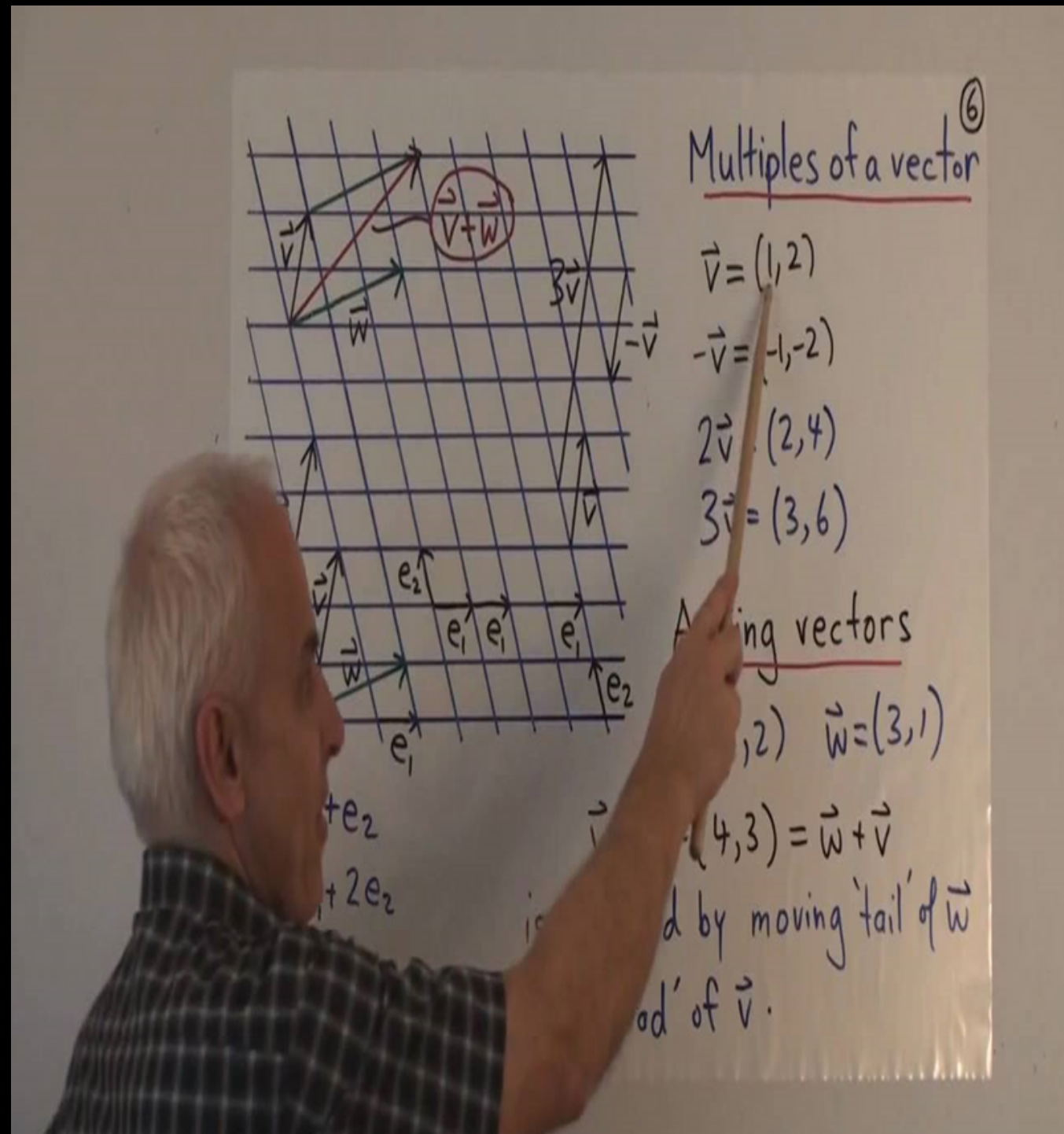
Solve one equation for one of the variables

STEP 2

Substitute (plug-in) this expression into the other equation and solve.

STEP 3

Resubstitute the value into the original equation to find the corresponding variable



Evaluates the expression given $x = -2$

a, $3x-1$

b, $5x^2-x+6$

Evaluates the expression given $x = -2$

a, $3x-1$

b, $5x^2-x+6$

$$3x-1$$

$$3(-2)-1$$

$$-6-1$$

$$7$$

Evaluates the expression given $x = -2$

a, $3x-1$

$$3x-1$$

$$3(-2)-1$$

$$-6-1$$

$$7$$

b, $5x^2-x+6$

$$5(-2)^2-(-2)+6$$

$$5(4)-(-2)+6$$

$$20+2+6$$

$$28$$

SUBSTITUTION METHOD

$$y = x - 8$$

$$y = 4$$

SUBSTITUTION METHOD

$$y = x - 8$$

$$y = 4$$

$$4 = x - 8$$

$$+8 \quad +8$$

$$12 = x$$

$$y = 12 - 8$$

$$y = 4$$



(12, 4)