

# Representing Vectors Lesson Objectives

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## Representing Vectors Lesson

Represent vectors geometrically and in component form

Determine the components of a vector

Find the magnitude of a vector

Determine whether two vectors are equal

## Operations with Vectors Lesson

Represent operations on vectors geometrically

Perform vector addition and subtraction and find the resultant vector

Perform scalar multiplication

## Unit Vectors Lesson

Represent vectors in the rectangular coordinate system in terms of  $\mathbf{i}$  and  $\mathbf{j}$

Find a unit vector

## Direction Angle Lesson

Find the direction angle of a vector

Represent a vector in terms of magnitude and direction

## Dot Product Lesson

Find the dot product of two vectors

Apply the properties of the dot product

## Angle Between Two Vectors Lesson

Use the alternative form of the dot product to find the angle between two vectors

Use the dot product to determine if two vectors are orthogonal, parallel, or neither

Use the dot product to solve real-world problems