Representing Vectors Key Words

Representing Vectors Lesson

component form – the horizontal and vertical change from the initial point to the terminal point

magnitude – the length of a vector

scalar – a real number used to describe the magnitude of a vector

scalar component – the magnitude of the horizontal and vertical unit vectors represented by a vector

standard position – a vector that has its initial point at the origin

vector – a quantity with magnitude and direction, denoted by an arrow whose length is the magnitude and whose direction is specified by the direction the arrow is pointing

zero vector – a vector with a magnitude of zero and no direction

Operations with Vectors Lesson

resultant vector – the vector that results from the sum of two or more vectors

scalar multiplication – multiplication of a vector and a real number

Unit Vectors Lesson

linear combination – the vector sum $v_1\mathbf{i} + v_2\mathbf{j}$ is a linear combination of vectors $\mathbf{i}$ and $\mathbf{j}$

standard unit vectors – the unit vectors $\mathbf{i} = \langle 1,0 \rangle$ and $\mathbf{j} = \langle 0,1 \rangle$

unit vector – a vector with a magnitude of 1

Direction Angle Lesson

direction angle – the measure of the direction of the position of vector **v** determined from rotation from the positive *x*-axis to **v**

Dot Product Lesson

dot product – a vector operation that represents the sum of the products of the horizontal and vertical components of two vectors and results in a scalar (real number)

Angle Between Two Vectors Lesson

orthogonal – two vectors where the included angle is 90°