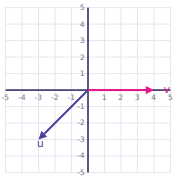
Vectors: Direction, Unit Vectors & Angles · 1

Find the angle between u = <-3, -3> and v = <4, 0>.



Vectors: Direction, Unit Vectors & Angles · 2

Find the angle between u = <-3, -5> and v = <-2, 2>. Round to the nearest degree.

Vectors: Direction, Unit Vectors & Angles · 3

A vector v has magnitude 6 and direction angle 330°. Write v in component form.

Vectors: Direction, Unit Vectors & Angles · 4

Find k so that <2, -3> and <6, k> are perpendicular.

Vectors: Direction, Unit Vectors & Angles · 5

Find the direction angle of v = <-2, -2√3>.

Vectors: Direction, Unit Vectors & Angles · 6

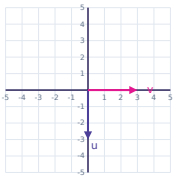
Find the unit vector in the direction of v = <21, 20>.

Vectors: Direction, Unit Vectors & Angles · 7

Find the angle between u = <-6, 1> and v = <-2, -1>. Round to the nearest degree.

Vectors: Direction, Unit Vectors & Angles · 8

Find the angle between u = <0, -3> and v = <3, 0>.



Vectors: Direction, Unit Vectors & Angles · 2

ANSWER

104°

Vectors: Direction, Unit Vectors & Angles · 1

ANSWER

135°

Vectors: Direction, Unit Vectors & Angles · 4

ANSWER

k = 4

Vectors: Direction, Unit Vectors & Angles · 3

ANSWER

<3√3, -3>

Vectors: Direction, Unit Vectors & Angles · 6

ANSWER

$$\left\langle \frac{21}{29}, \frac{20}{29} \right\rangle$$

Vectors: Direction, Unit Vectors & Angles · 5

ANSWER

240°

Vectors: Direction, Unit Vectors & Angles · 8

ANSWER

90°

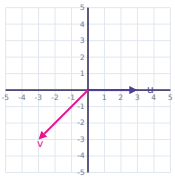
Vectors: Direction, Unit Vectors & Angles · 7

ANSWER

36°

Vectors: Direction, Unit Vectors & Angles · 9

Find the angle between u = <3, 0> and v = <-3, -3>.



Vectors: Direction, Unit Vectors & Angles · 10

Find the angle between u = <-3, -4> and v = <-4, -1>. Round to the nearest degree.

Vectors: Direction, Unit Vectors & Angles · 11

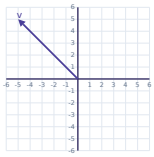
A vector v has magnitude 8 and direction angle 210°. Write v in component form.

Vectors: Direction, Unit Vectors & Angles · 12

Find k so that <4, -1> and <4, k> are perpendicular.

Vectors: Direction, Unit Vectors & Angles · 13

Find the direction angle of v = <-5, 5>.



Vectors: Direction, Unit Vectors & Angles · 14

Find the unit vector in the direction of v = <-6, 8>.

Vectors: Direction, Unit Vectors & Angles · 15

Find the angle between u = <5, 4> and v = <0, -4>. Round to the nearest degree.

Vectors: Direction, Unit Vectors & Angles · 16

Find the angle between u = <-5, 1> and v = <3, 3>. Round to the nearest degree.

Vectors: Direction, Unit Vectors & Angles · 10

ANSWER

39°

Vectors: Direction, Unit Vectors & Angles · 9

ANSWER

135°

Vectors: Direction, Unit Vectors & Angles · 12

ANSWER

k = 16

Vectors: Direction, Unit Vectors & Angles · 11

ANSWER

<-4√3, -4>

Vectors: Direction, Unit Vectors & Angles · 14

ANSWER

$$\frac{3}{}\quad\frac{4}{}$$

<-5, 5>

Vectors: Direction, Unit Vectors & Angles · 13

ANSWER

135°

Vectors: Direction, Unit Vectors & Angles · 16

ANSWER

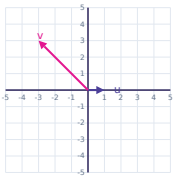
124°

Vectors: Direction, Unit Vectors & Angles · 15

ANSWER

129°

Find the angle between u = <1, 0> and v = <-3, 3>.

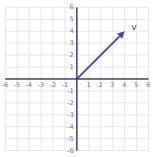


Find the angle between u = <-2, -2> and v = <6, -4>. Round to the nearest degree.

A vector v has magnitude 2 and direction angle 240°. Write v in component form.

Find k so that <-4, 1> and <4, k> are perpendicular.

Find the direction angle of v = <4, 4>.



Find the unit vector in the direction of v = <-21, -20>.

Find the angle between u = <-3, -3> and v = <5, 4>. Round to the nearest degree.

Find the direction angle of v = <1, √3>.

Vectors: Direction, Unit Vectors & Angles · 18

ANSWER

$101°$

Vectors: Direction, Unit Vectors & Angles · 17

ANSWER

$135°$

Vectors: Direction, Unit Vectors & Angles · 20

ANSWER

$k = 16$

Vectors: Direction, Unit Vectors & Angles · 19

ANSWER

$\langle -1, -\sqrt{3} \rangle$

Vectors: Direction, Unit Vectors & Angles · 22

ANSWER

$$\left\langle -\frac{21}{29}, -\frac{20}{29} \right\rangle$$

Vectors: Direction, Unit Vectors & Angles · 21

ANSWER

$45°$

Vectors: Direction, Unit Vectors & Angles · 24

ANSWER

$60°$

Vectors: Direction, Unit Vectors & Angles · 23

ANSWER

$174°$