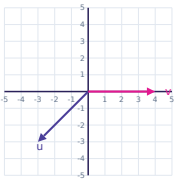
Task card 1 Vectors: Direction, Unit Vectors &...

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



Task card 2 Vectors: Direction, Unit Vectors &...

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

Task card 3 Vectors: Direction, Unit Vectors &...

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

Task card 4 Vectors: Direction, Unit Vectors &...

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

Task card 5 Vectors: Direction, Unit Vectors &...

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

Task card 6 Vectors: Direction, Unit Vectors &...

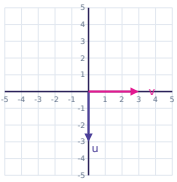
Find the unit vector in the direction of v = <21, 20>.

Task card 7 Vectors: Direction, Unit Vectors &...

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

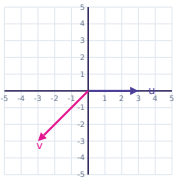
Task card 8 Vectors: Direction, Unit Vectors &...

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



Task card 9 Vectors: Direction, Unit Vectors &...

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



Task card 10 Vectors: Direction, Unit Vectors &...

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

Task card 11 Vectors: Direction, Unit Vectors &...

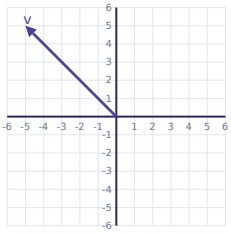
A vector v has magnitude 8 and direction angle 210°. Write v in component form.

Task card 12 Vectors: Direction, Unit Vectors &...

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

Task card 13 Vectors: Direction, Unit Vectors &...

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



Task card 14 Vectors: Direction, Unit Vectors &...

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

Task card 15 Vectors: Direction, Unit Vectors &...

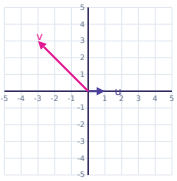
Find the angle between u = <5, 4> and v = <0, -4>. Round to the nearest degree.

Task card 16 Vectors: Direction, Unit Vectors &...

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

Task card 17 Vectors: Direction, Unit Vectors &...

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



Task card 18 Vectors: Direction, Unit Vectors &...

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

Task card 19 Vectors: Direction, Unit Vectors &...

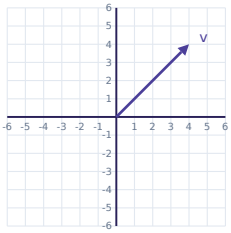
A vector v has magnitude 2 and direction angle 240°. Write v in component form.

Task card 20 Vectors: Direction, Unit Vectors &...

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

Task card 21 Vectors: Direction, Unit Vectors &...

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



Task card 22 Vectors: Direction, Unit Vectors &...

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

Task card 23 Vectors: Direction, Unit Vectors &...

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

Task card 24 Vectors: Direction, Unit Vectors &...

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

Vectors: Direction, Unit Vectors & Angles Task Cards

Recording sheet · Grade 12 · Give exact answers. Write vectors as <a, b> and angles in degrees (0° ≤ θ < 360° for direction angles).

Scan to check your answers

Name: _____ Date: _____

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Vectors: Direction, Unit Vectors & Angles Task Cards: Answer Key

Grade 12 · Hard

The answers online

1. 135°	**2.** 104°	**3.** $\langle 3\sqrt{3}, -3 \rangle$
4. k = 4	**5.** 240°	**6.** $\left\langle \frac{21}{29}, \frac{20}{29} \right\rangle$
7. 36°	**8.** 90°	**9.** 135°
10. 39°	**11.** $\langle -4\sqrt{3}, -4 \rangle$	**12.** k = 16
13. 135°	**14.** $\left\langle -\frac{3}{5}, \frac{4}{5} \right\rangle$	**15.** 129°
16. 124°	**17.** 135°	**18.** 101°
19. $\langle -1, -\sqrt{3} \rangle$	**20.** k = 16	**21.** 45°
22. $\left\langle -\frac{21}{29}, -\frac{20}{29} \right\rangle$	**23.** 174°	**24.** 60°