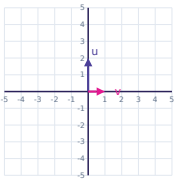
Task card 1 Vectors: Direction, Unit Vectors &...

Find the angle between u = <0, 2> and v = <1, 0>.



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

Find the unit vector in the direction of v = <5, 12>.

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

A vector v has magnitude 10 and direction angle 150°. Write v in component form.

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

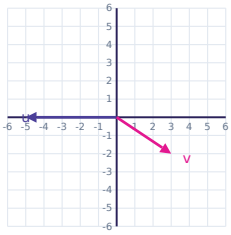
Find k so that <4, -2> and <-5, k> are perpendicular.

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

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

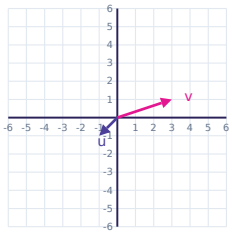
Task card 6 Vectors: Direction, Unit Vectors &...

u = <-5, 0> and v = <3, -2>. Find 4u + 2v.



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

u = <-1, -1> and v = <3, 1>. Find 4u + 2v.

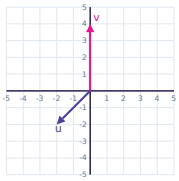


Task card 8 Vectors: Direction, Unit Vectors &...

Find k so that <6, 3> and <4, k> are perpendicular.

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

Find the angle between u = <-2, -2> and v = <0, 4>.



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

Find the angle between u = <4, 4> and v = <-1, -5>. Round to the nearest degree.

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

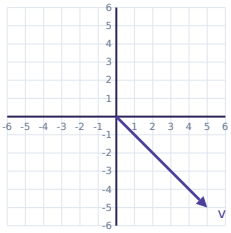
A vector v has magnitude 10 and direction angle 240°. Write v in component form.

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

Find k so that <-4, 3> and <-6, 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 = <21, 20>.

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

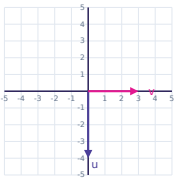
Find the angle between u = <-1, 6> and v = <-6, 1>. Round to the nearest degree.

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

Find the direction angle of v = <-2, $2\sqrt{3}$>.

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

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



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

Find the angle between u = <0, -2> and v = <3, -5>. Round to the nearest degree.

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

A vector v has magnitude 4 and direction angle 240°. Write v in component form.

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

Find k so that <3, 3> and <4, k> are perpendicular.

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

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

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

Find the unit vector in the direction of v = <-24, -7>.

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

Find the angle between u = <5, 2> and v = <0, -4>. Round to the nearest degree.

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

Find k so that <4, -2> and <2, k> are perpendicular.

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 · Medium

The answers online

1. 90°	**2.** $\left\langle \frac{5}{13}, \frac{12}{13} \right\rangle$	**3.** <-5√3, 5>
4. k = -10	**5.** 240°	**6.** <-14, -4>
7. <2, -2>	**8.** k = -8	**9.** 135°
10. 146°	**11.** <-5, -5√3>	**12.** k = -8
13. 315°	**14.** $\left\langle \frac{21}{29}, \frac{20}{29} \right\rangle$	**15.** 71°
16. 120°	**17.** 90°	**18.** 31°
19. <-2, -2√3>	**20.** k = -4	**21.** 240°
22. $\left\langle -\frac{24}{25}, -\frac{7}{25} \right\rangle$	**23.** 112°	**24.** k = 4