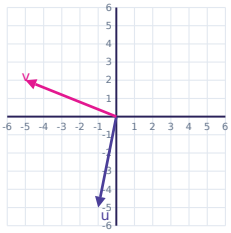
Task card 1 Vectors: Direction, Unit Vectors &...

u = <-1, -5> and v = <-5, 2>. Find 3u - 2v.



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

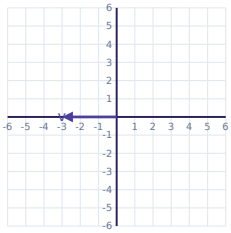
Find the unit vector in the direction of v = <-4, 3>.

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

A vector v has magnitude 12 and direction angle 60°. Write v in component form.

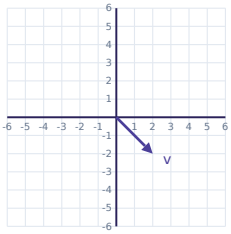
Task card 4 Vectors: Direction, Unit Vectors &...

Find the direction angle of v = <-3, 0>.



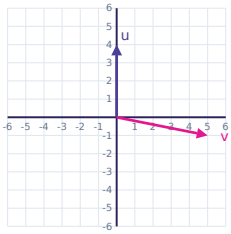
Task card 5 Vectors: Direction, Unit Vectors &...

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



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

u = <0, 4> and v = <5, -1>. Find 3u + 3v.

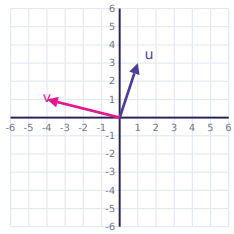


Task card 7 Vectors: Direction, Unit Vectors &...

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

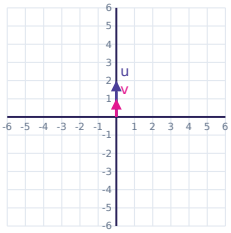
Task card 8 Vectors: Direction, Unit Vectors &...

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



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

u = <0, 2> and v = <0, 1>. Find 3u - 3v.



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

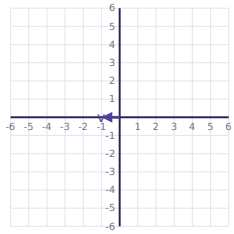
Find the unit vector in the direction of v = <24, -7>.

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

A vector v has magnitude 6 and direction angle 30°. Write v in component form.

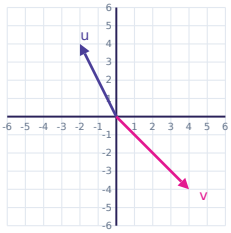
Task card 12 Vectors: Direction, Unit Vectors &...

Find the direction angle of v = <-1, 0>.



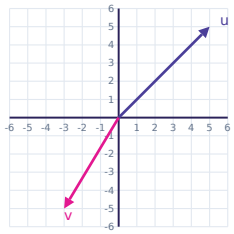
Task card 13 Vectors: Direction, Unit Vectors &...

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



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

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

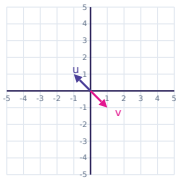


Task card 15 Vectors: Direction, Unit Vectors &...

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

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

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



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

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

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

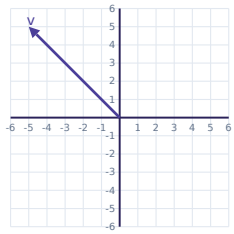
A vector v has magnitude 6 and direction angle 120°. Write v in component form.

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

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

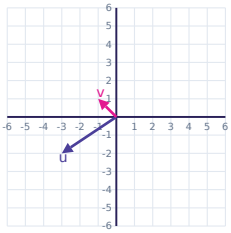
Task card 20 Vectors: Direction, Unit Vectors &...

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



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

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



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

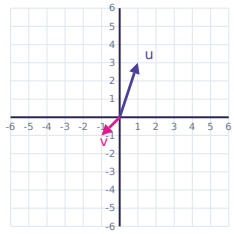
A vector v has magnitude 2 and direction angle 150°. Write v in component form.

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

Find k so that <-2, -1> and <-5, k> are perpendicular.

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

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



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 · Easy

The answers online

1. $\langle 7, -19 \rangle$	**2.** $\left\langle -\frac{4}{5}, \frac{3}{5} \right\rangle$	**3.** $\langle 6, 6\sqrt{3} \rangle$
4. 180°	**5.** 315°	**6.** $\langle 15, 9 \rangle$
7. $\left\langle \frac{7}{25}, \frac{24}{25} \right\rangle$	**8.** $\langle -10, 9 \rangle$	**9.** $\langle 0, 3 \rangle$
10. $\left\langle \frac{24}{25}, -\frac{7}{25} \right\rangle$	**11.** $\langle 3\sqrt{3}, 3 \rangle$	**12.** 180°
13. $\langle 0, 8 \rangle$	**14.** $\langle 14, 10 \rangle$	**15.** $\left\langle \frac{12}{13}, -\frac{5}{13} \right\rangle$
16. 180°	**17.** $\left\langle \frac{3}{5}, \frac{4}{5} \right\rangle$	**18.** $\langle -3, 3\sqrt{3} \rangle$
19. $k = -6$	**20.** 135°	**21.** $\langle -7, -8 \rangle$
22. $\langle -\sqrt{3}, 1 \rangle$	**23.** $k = 10$	**24.** $\langle -1, 3 \rangle$