**Task card 1** Vectors in 3D: Dot & Cross Product...

Find the magnitude of v = <2, 4, 4>.

**Task card 2** Vectors in 3D: Dot & Cross Product...

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

**Task card 3** Vectors in 3D: Dot & Cross Product...

u = <6, -5, 3> and v = <6, 6, -5>. Find 2u + v.

**Task card 4** Vectors in 3D: Dot & Cross Product...

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

**Task card 5** Vectors in 3D: Dot & Cross Product...

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

**Task card 6** Vectors in 3D: Dot & Cross Product...

Find the magnitude of v = <2, 6, 9>.

**Task card 7** Vectors in 3D: Dot & Cross Product...

Find the magnitude of v = <2, 9, 6>.

**Task card 8** Vectors in 3D: Dot & Cross Product...

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

**Task card 9** Vectors in 3D: Dot & Cross Product...

Find the magnitude of v = <-4, 2, 4>.

**Task card 10** Vectors in 3D: Dot & Cross Product...

u = <-3, 4, 1> and v = <-5, 1, 2>. Find u · v.

**Task card 11** Vectors in 3D: Dot & Cross Product...

u = <4, 3, -3> and v = <-4, 0, 1>. Find 2u - 2v.

**Task card 12** Vectors in 3D: Dot & Cross Product...

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

**Task card 13** Vectors in 3D: Dot & Cross Product...

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

**Task card 14** Vectors in 3D: Dot & Cross Product...

Find the magnitude of v = <2, -1, 2>.

**Task card 15** Vectors in 3D: Dot & Cross Product...

Find the magnitude of v = <6, 2, 9>.

**Task card 16** Vectors in 3D: Dot & Cross Product...

u = <0, 2, -4> and v = <1, -3, 1>. Find u · v.

**Task card 17** Vectors in 3D: Dot & Cross Product...

u = <6, 2, -4> and v = <-1, -4, 2>. Find u · v.

**Task card 18** Vectors in 3D: Dot & Cross Product...

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

**Task card 19** Vectors in 3D: Dot & Cross Product...

Find the magnitude of v = <10, 11, -2>.

**Task card 20** Vectors in 3D: Dot & Cross Product...

Are u = <-2, 0, -3> and v = <0, -2, 2> perpendicular? Write yes or no.

**Task card 21** Vectors in 3D: Dot & Cross Product...

u = <2, 1, 6> and v = <1, -2, -5>. Find 4u + 3v.

**Task card 22** Vectors in 3D: Dot & Cross Product...

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

**Task card 23** Vectors in 3D: Dot & Cross Product...

Find the distance between the points P(-4, 3, 1) and Q(-1, -9, 5).

**Task card 24** Vectors in 3D: Dot & Cross Product...

u = <-5, -1, 4> and v = <-2, -1, 6>. Find u · v.

# Vectors in 3D: Dot & Cross Products Task Cards

Recording sheet · Grade 12 · Give exact answers. Write vectors as <a, b, c>.

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 in 3D: Dot & Cross Products Task Cards: Answer Key

Grade 12 · Easy

The answers online

| | | |
|---|---|---|
| **1.** 6 | **2.** 7 | **3.** <18, -4, 1> |
| **4.** <-1, -1, 1> | **5.** 1 | **6.** 11 |
| **7.** 11 | **8.** 21 | **9.** 6 |
| **10.** 21 | **11.** <16, 6, -8> | **12.** <-16, 0, 0> |
| **13.** -9 | **14.** 3 | **15.** 11 |
| **16.** -10 | **17.** -22 | **18.** <-8, 9, -3> |
| **19.** 15 | **20.** no | **21.** <11, -2, 9> |
| **22.** <-8, 8, 20> | **23.** 13 | **24.** 35 |