



MATHS

BOOKS - INDEPENDENTLY PUBLISHED

MATHS (ENGLISH)

VECTORS

Examples

1. Let vector $\vec{V} = (2, 3)$ and vector $\vec{U} = (6, -4)$.

(i) What is the resultant of \vec{U} and \vec{V} ?



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2. Let vector $\vec{V} = (2, 3)$ and vector $\vec{U} = (6, -4)$.

(ii) What is norm of \vec{U} ?



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3. Let vector $\vec{V} = (2, 3)$ and vector $\vec{U} = (6, -4)$.

(iii) Express \vec{V} in terms of \vec{i} and \vec{j} .

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4. Let vector $\vec{V} = (2, 3)$ and vector $\vec{U} = (6, -4)$.

Are \vec{U} and \vec{V} perpendicular?

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5. If $\vec{U} = (-1, 4)$ and the resultant of \vec{U} and \vec{V} is $(4, 5)$, find \vec{V} .



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Exercises

1. Suppose $\vec{x} = (-3, -1)$, $\vec{y} = (-1, 4)$.

Find the magnitude of $\vec{x} + \vec{y}$.

A. 2

B. 3

C. 4

D. 5

Answer: D



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2. If $\vec{V} = 2\vec{i} + 3\vec{j}$ and $\vec{Y} = \vec{i} - 5\vec{j}$, the resultant vector of $2\vec{U} + 3\vec{V}$ equals

A. $3\vec{i} - 2\vec{j}$

B. $5\vec{i} + \vec{j}$

C. $7\vec{i} - 9\vec{j}$

D. $8\vec{i} - \vec{j}$

Answer: D



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3. A unit vector perpendicular to vector

$$\vec{V} = (3, -4) \text{ is}$$

A. $(4, 3)$

B. $\left(\frac{3}{5}, \frac{4}{5}\right)$

C. $\left(-\frac{3}{5}, -\frac{4}{5}\right)$

D. $\left(-\frac{4}{5}, -\frac{3}{5}\right)$

Answer: D



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