

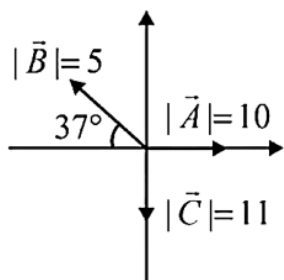
Yakeen NEET 2.0 (2026)

Physics

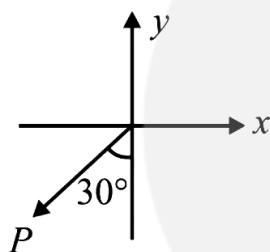
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Vectors

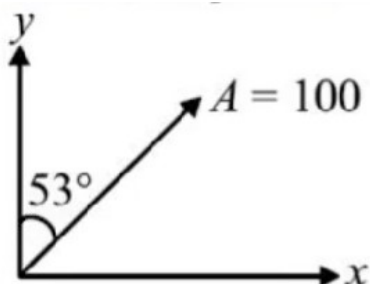
Q1 Find the resultant of following vectors



- (A) 8 (B) 6
(C) 10 (D) 20

Q2 If $|\vec{P}| = 20$, then \vec{P} in cartesian form is

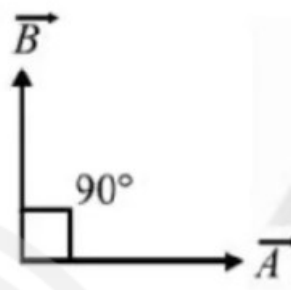
- (A) $10\sqrt{3}\hat{i} + 10\hat{j}$
(B) $10\hat{i} + 10\sqrt{3}\hat{j}$
(C) $-10\hat{i} + 10\sqrt{3}\hat{j}$
(D) $-10\hat{i} - 10\sqrt{3}\hat{j}$

Q3 Find x-component of vector \vec{A} .

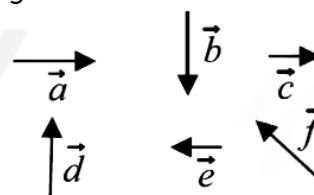
- (A) 80 (B) 60
(C) 40 (D) none

Q4 If $A = 10$ units and $B = 6$ units then find.

$$|\vec{R}| = |\vec{A} + \vec{B}| = ?$$

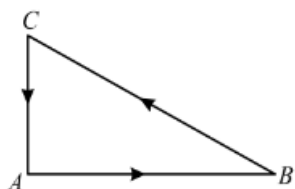


- (A) $\sqrt{136}$
(B) $\sqrt{360}$
(C) $\sqrt{105}$
(D) None

Q5 Six vectors, \vec{a} through \vec{f} have the magnitudes and directions indicated in the figure. Which of the following statements is true?

- (A) $\vec{b} + \vec{c} = \vec{f}$
(B) $\vec{d} + \vec{c} = \vec{f}$
(C) $\vec{d} + \vec{e} = \vec{f}$
(D) $\vec{b} + \vec{e} = \vec{f}$

Q6 Three forces start acting simultaneously on a particle moving with velocity \vec{v} . These forces are represented in magnitude and direction by the three sides of a triangle ABC as shown in the figure. The particle will now move with velocity



- (A) greater than \vec{v}
 (B) $|\vec{v}|$ in the direction of the largest force
 (C) \vec{v} , remaining unchanged
 (D) less than \vec{v} .

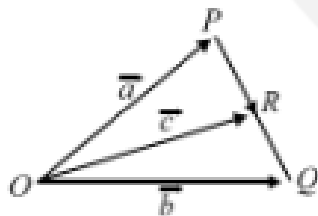
Q7 The magnitude of vectors \vec{A} , \vec{B} and \vec{C} are 3, 4 and 5 units respectively. If $\vec{A} + \vec{B} = \vec{C}$, the angle between \vec{A} and \vec{B} is:

- (A) $\pi/2$
 (B) $\cos^{-1}(0.6)$
 (C) $\tan^{-1}(7/5)$
 (D) $\pi/4$

Q8 If two vectors have magnitudes are in the ratio 5 : 8, their resultant has maximum and minimum magnitudes in the ratio of...

- (A) 13 : 3 (B) 3 : 1
 (C) 8 : 5 (D) 6 : 5

Q9 Figure shows the vectors \vec{a} , \vec{b} and \vec{c} where R is the mid-point of P Q. Then which of the following is correct.



- (A) $\vec{a} + \vec{b} = 2\vec{c}$
 (B) $\vec{a} + \vec{b} = \vec{c}$
 (C) $\vec{a} - \vec{b} = 2\vec{c}$
 (D) $\vec{a} - \vec{b} = \vec{c}$

Q10 A vector $\vec{A} = 4\hat{i} - 3\hat{j} + 5\hat{k}$. The magnitude of the vector is:

- (A) $\sqrt{50}$
 (B) $\sqrt{16 + 9}$
 (C) $4\hat{i} + 3\hat{j}$
 (D) $\sqrt{9 + 25}$

Q11 The vector $\vec{A} = 2\hat{i} + 3\hat{j} + 4\hat{k}$ and vector $\vec{B} = 4\hat{i} + 6\hat{j} + 8\hat{k}$ are given.

What is the angle between these two vectors?

- (A) 0° (B) 45°
 (C) 90° (D) 60°

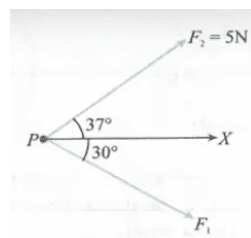
Q12 If $\vec{A} = 3\hat{i} + 4\hat{j}$ and $\vec{B} = 7\hat{i} + 24\hat{j}$, Then the vector having the same magnitude as \vec{B} and parallel to \vec{A} is -

- (A) $15\hat{i} + 20\hat{j}$
 (B) $-15\hat{i} + 20\hat{j}$
 (C) $15\hat{i} - 20\hat{j}$
 (D) $15\hat{i} + 30\hat{j}$

Q13 Let $\vec{a} = \hat{i} + \hat{j} + \hat{k}$, $\vec{b} = \hat{i} - \hat{j} + \hat{k}$ and $\vec{c} = \hat{i} - \hat{j} - \hat{k}$ be three vectors, A vector \vec{v} in the plane of \vec{a} and \vec{b} , whose projection on \vec{c} is $\frac{1}{\sqrt{3}}$ given by

- (A) $\hat{i} - 3\hat{j} + 3\hat{k}$
 (B) $-3\hat{i} - 3\hat{j} - \hat{k}$
 (C) $3\hat{i} - \hat{j} + 3\hat{k}$
 (D) $\hat{i} + 3\hat{j} - 3\hat{k}$

Q14 According to Newton's second law of motion, resultant force on a particle is in the direction of acceleration of the particle.



Two forces F_1 and F_2 are acting on a particle as shown in the figure. The acceleration of the particle is along X -axis. Find the value of F_1 (in newton).



Answer Key

Q1 (C)

Q2 (D)

Q3 (A)

Q4 (A)

Q5 (C)

Q6 (C)

Q7 (A)

Q8 (A)

Q9 (A)

Q10 (A)

Q11 (A)

Q12 (A)

Q13 (C)

Q14 4N



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