

Q4. If $\vec{A} = 12 \hat{x} - 16 \hat{y}$ and $\vec{B} = -24 \hat{x} + 10 \hat{y}$, the magnitude of the vector $\vec{C} = 2\vec{A} - \vec{B}$?

a) 42.7

b) 12.4

c) 63.8

d) 17.3

e) 70.5

Q5. The magnitude of a component of a vector is:

a) always larger than the magnitude of the vector.

b) always less than the magnitude of the vector.

c) sometimes larger than the magnitude of the vector.

d) equal or less than the magnitude of the vector.

Q4. If $\mathbf{A} = 8x + 2y$, $\mathbf{B} = -8x + 4y$ and $\mathbf{C} = \mathbf{A} + \mathbf{B}$. The magnitude of \mathbf{C} is :

a) 0

b) 22

c) 36

d) 6

e) 12

Q5. The magnitude of the x-component for vector \mathbf{A} that makes an angle 90° with X-axis is :

a) 90

b) 0

c) $0.5A$

d) A

e) $-0.5A$

Q6. Six vectors, **a** through **f** have the magnitudes and directions as indicated in the figure.

Which of the following statements is true?

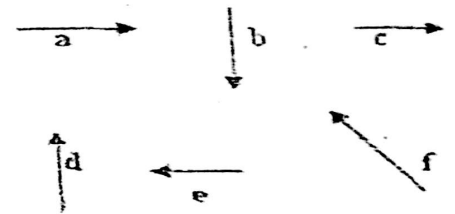
a) $a + e = f$

b) $b + c = f$

c) $d + c = f$

d) $d + e = f$

e) $a + b = f$



Q4. If $\mathbf{A} = 12\mathbf{i} - 16\mathbf{j}$ and $\mathbf{B} = -24\mathbf{i} + 10\mathbf{j}$, what is the magnitude of the vector $\mathbf{C} = 2\mathbf{A} - \mathbf{B}$?

a) 42

b) 64

c) 13

d) 22

e) 90

Q5. If $\mathbf{A} = -3\mathbf{i} + 2\mathbf{j}$ what vector \mathbf{B} when added to \mathbf{A} gives a resultant vector with no x component and negative y component of 7 units in length

a) $3\mathbf{i} - 5\mathbf{j}$

b) $3\mathbf{i} - 6\mathbf{j}$

c) $3\mathbf{i} - 7\mathbf{j}$

d) $3\mathbf{i} - 8\mathbf{j}$

e) $3\mathbf{i} - 9\mathbf{j}$

- Q3** The angle between vector $A=2i$ and vector $B=3j$ is:
a) 0° b) 45° c) 90° d) 120° e) 180°
- Q4** If vector $A=i+j$ and vector $B=2i+2j$ the magnitude of $(B-A)$ is:
a) 0.7 b) 1.4 c) 1.7 d) 0 e) None of these

Q4. If $A = 2\hat{i} - 3\hat{j}$ and $B = 1\hat{i} - 2\hat{j}$, then $A - 2B =$.

a). $1\hat{j}$

b). $-1\hat{j}$

c). $4\hat{i} - 7\hat{j}$

d). $-4\hat{i} + 7\hat{j}$

e). $2\hat{i} - 3\hat{j}$



Q6. For the vectors A and B shown in the figure, the magnitude of $(B - A)$ is:

- (a) 3.16, -71.56° (b) 6.13, 56.3°
(c) 3.60, 63.4° (d) 4.23, 71.56° (e) None of these

