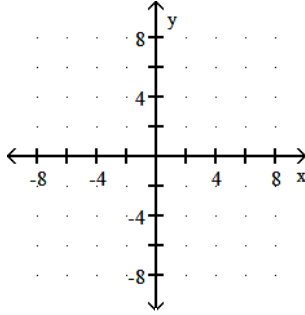


Sketch the vector as a position vector and find its magnitude.

1) $v = 3i - 4j$



Let v be the vector from initial point P_1 to terminal point P_2 . Write v in terms of i and j .

2) $P_1 = (-1, 2); P_2 = (4, -4)$

A) $v = -6i + 5j$

B) $v = 2i - 3j$

C) $v = -3i + 2j$

D) $v = 5i - 6j$

2) _____

Find the specified vector or scalar.

3) $u = 11i - 3j, v = -4i + 8j$; Find $u + v$.

A) $-15i + 5j$

B) $7i + 5j$

C) $15i + 6j$

D) $6i + 5j$

3) _____

4) $u = -2i - 2j, v = 8i + 7j$; Find $u - v$.

A) $-10i - 9j$

B) $-12i + 5j$

C) $6i + 5j$

D) $-11i + 5j$

4) _____

Find the unit vector that has the same direction as the vector v .

5) $v = 3i + 4j$

A) $u = 15i + 20j$

B) $u = -\frac{4}{5}i - \frac{3}{5}j$

C) $u = \frac{3}{5}i + \frac{4}{5}j$

D) $u = \frac{5}{3}i + \frac{5}{4}j$

5) _____

Write the vector v in terms of i and j whose magnitude $\|v\|$ and direction angle θ are given.

6) $\|v\| = 8, \theta = 30^\circ$

A) $v = 4\sqrt{2}i + 4\sqrt{2}j$

B) $v = -4\sqrt{3}i + 4j$

C) $v = 4i + 4\sqrt{3}j$

D) $v = 4\sqrt{3}i + 4j$

6) _____

Solve the problem.

7) A child throws a ball with a speed of 4 feet per second at an angle of 48° with the horizontal.

Express the vector described in terms of i and j . If exact values are not possible, round components to 3 decimals.

A) $2.973i + 2.677j$

B) $-2.677i + 2.973j$

C) $2.973i - 2.677j$

D) $2.677i + 2.973j$

7) _____

8) One rope pulls a barge directly east with a force of 82 newtons, and another rope pulls the barge directly north with a force of 70 newtons. Find the magnitude of the resultant force acting on the barge.

A) 5740 newtons

B) 108 newtons

C) 12 newtons

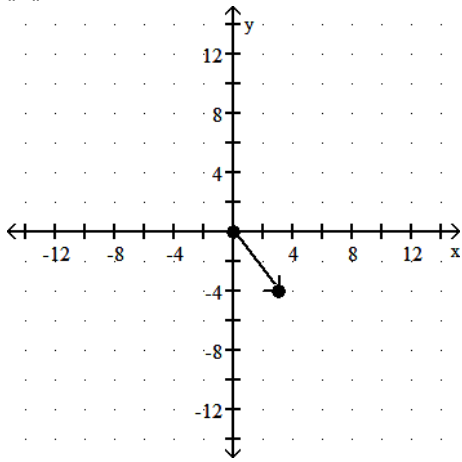
D) 152 newtons

8) _____

Answer Key

Testname: PRACTICE16

1) $\|v\| = 5$



- 2) D
- 3) B
- 4) A
- 5) C
- 6) D
- 7) D
- 8) B