University of Imam Muhammad

College of Science
Quiz 1

General Physics 101
(1435-1436)

Student Name	Student ID	Section

question	1	2	3	4	5	6	7	8	9
answer									

Choose the correct answer and write the solution:

1- Find the indicated quantity. If a = 3i - 5j and b = -7i + 4j, find 3a – 4b.
a. 37i - 31j
b. -4i – j
c. 17i - 10j
d. -19i + j

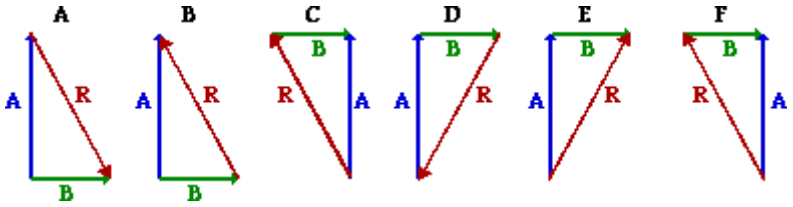
2 - Find the dot product v • w, where (v = -11i + 9j and w = 9i - 7j)
a. -99
b. -63
c. -162
d. -36

3 - Find the angle between A and B. Round your answer to one decimal place, if necessary. A = 7i + 6j and B = 7i - 7j
a. 85.6°
b. 95.6°
c. 42.8°
d. 32.8°

4 - The scalar quantities have only:
a. Magnitude with direction
b. Magnitude without direction
c. Without magnitude and without direction
d. All choices mentioned above are correct

5 - The value of i^. (j^. k^) is:
a. zero
b. +1
c. -1
d. 3

6 - Vector A is directed northward and vector B is directed eastward. Which of the following vector addition diagrams best represent the addition of vectors A and B and the subsequent resultant?



7 - The polar coordinates of a point are r = 5.50 m and θ= 240°. What are the Cartesian coordinates of this point?

a. x = -2.8m and y = - 4.8m
b. x = 2.8m and y = 4.8 m
c. x =- 4.8m and y = - 2.8m
d. x = 4.8m and y = 2.8 m

8 - A boy walks 2 meters due north and then walks 3 meters due west. The boy walked a distance of

a. 3.6 meters
b. 13 meters
c. 4 meters
d. 9 meters

9 - Consider a vector $\vec{A} = 5\ m$ in northeast direction, what are the x and y components of $\vec{A}$

a. $\vec{A}_x = 3.5$ m and $\vec{A}_y = 3.5$ m
b. $\vec{A}_x = -3.5$ m and $\vec{A}_y = 3.5$ m
c. $\vec{A}_x = 3.5$ m and $\vec{A}_y = -3.5$ m
d. $\vec{A}_x = -3.5$ m and $\vec{A}_y = -3.5$ m

10 - Consider tow vectors A and B if vector A of magnitude 2m in east and B of magnitude 4m in a direction of 270^o

a. Draw the result vector of A + B

b. Write the result vector

Best Wishes
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