

# University of Imam Muhammad

College of Science  
first QUIZ



General Physics 101  
(1435-1436)

Student Name	Student ID	Section

A) A particle moves along the x axis. Its x coordinate varies with time according to the expression  $x = -4t + 2t^2$ , where x is in meters and t is in seconds

1- Determine the displacement of the particle in the time intervals  $t = 0$  to  $t = 3$  s

2- Find the velocity at any time

3- Determine the velocity at  $t = 3$  s.

4- Find the average velocity in the time interval (0 to 3s).

5- Determine the acceleration at  $t = 3$  s.

6- Find the average acceleration in the time interval  $t = 0$  s to  $t = 2$  s.

B) If  $[A = 2i + 3j]$  m and  $[B = 4i - 2j]$  m .

1-determine the magnitude of two vectors

2- Prove that two vectors are perpendicular

*Best wishes*

*7. Merfat Al-Zumia*