Phys 1230

QUIZ 2 (12 Points)

NAME ________________________________ 2/13/19 HAPPY VALENTINE’S DAY

TOMORROW!

#1 Find the magnitude and angle for the vector:
\[ \vec{A} = -4.0 \hat{\imath} - 3.0 \hat{j} \]

For the given "v versus t" graph: (Include units)

(a) Find acceleration "a" at \( t = 1 \) s

(b) " " at \( t = 3 \) s

(c) Find the distance traveled from \( t = 0 \) to \( t = 2 \) s

(d) Find the distance traveled from \( t = 0 \) to \( t = 45 \) s

(e) Find the instantaneous velocity at \( t = 3 \) s

(f) Find the average velocity from \( t = 0 \) to \( t = 45 \) s

(g) Find the average acceleration from \( t = 0 \) to \( t = 45 \) s

#3 A ball is thrown with an initial velocity of 15 m/s straight up into the air. (Neglect air friction.)

(a) How high does the ball rise?

(b) How long of time (in seconds) does it take for the ball to return to the hand?

(c) Fill in the following motion graphs

\[ v = at + v_0 \]
\[ x-x_0 = \frac{1}{2} at^2 + v_0 t \]
\[ v^2 = v_0^2 + 2a(x-x_0) \]
\[ x-x_0 = \frac{v_0 + v}{2} t \]

In case you need them (8/16 If)

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