

Quiz #3

1. In a 1D constant-acceleration problem, how many of the variables Δx , v_i , v_f , a , and Δt do you need before you can solve the problem?

- A) 1 B) 2 C) 3 D) 4

2. "I drop a penny two meters above the ground. How long does it take to reach the ground?" Which of the following variables are you *not* given in this description?

- A) v_i B) v_f C) a D) Δy

3. If I have the variables shown to the right, which equation would I use?

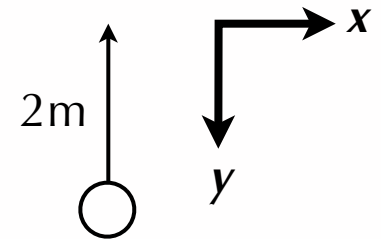
- A) $\Delta x = \frac{1}{2} (v_i + v_f) \Delta t$ B) $v_f = v_i + a\Delta t$
C) $\Delta x = v_i \Delta t + \frac{1}{2} a (\Delta t)^2$ D) $\Delta x = v_f \Delta t - \frac{1}{2} a (\Delta t)^2$
E) $v_f^2 = v_i^2 + 2a\Delta x$

Δx	4m
v_i	0m/s
v_f	
a	-2m/s ²
Δt	NEED

For the following two questions, suppose I have a problem that starts "I throw a ball 2 meters up into the air." The axes are as shown to the right.

4. The displacement of the ball is

- A) +2m B) -2m

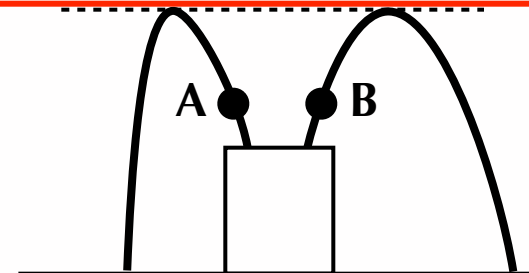


5. The acceleration of the ball is

- A) +9.8m/s² B) -9.8m/s²

6. The picture shows the trajectories of two cannonballs. Which ball hits the ground first?

- A) A B) B C) Both hit at the same time.



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CBCBAC

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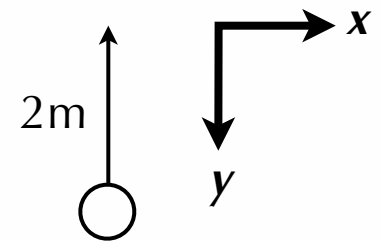
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