

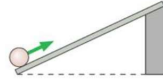
Quiz 2

ID # _____

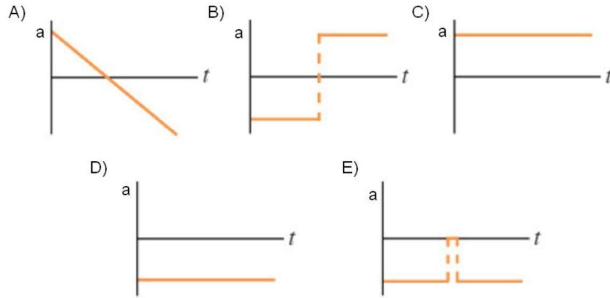
Name: _____

1)

The ball rolls up the ramp, then back down.



Which is the correct acceleration graph, if the axis up (along the slope) is positive?

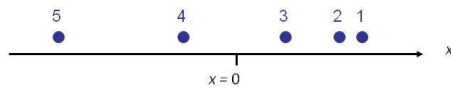


Answer: _____

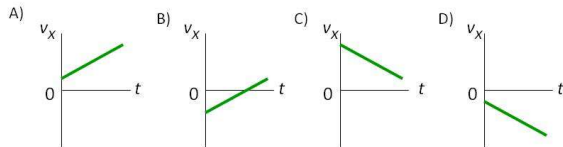
Rationale:

(2)

A motion diagram for a moving object is shown.



Which of the following v_x-t graphs best matches the motion?



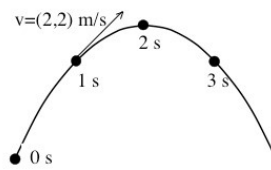
Answer: _____

Rationale:

(3)

A physics student on Planet Meepzorp throws a ball that follows the parabolic trajectory shown. The ball's position is shown at 1 second intervals.

At $t=1$ s, the ball's velocity is $\mathbf{v} = (2\mathbf{i} + 2\mathbf{j})$ m/s.



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What is the magnitude of the acceleration due to gravity on Planet Meepzorp (in m/s^2)?

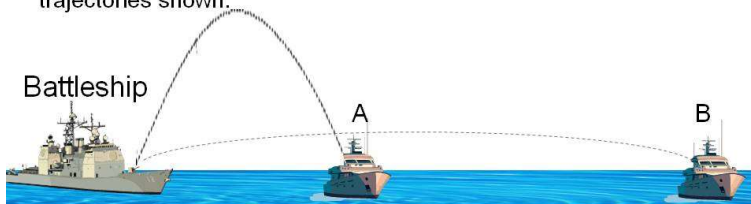
- A) 9.8
- B) 2
- C) 4
- D) $\sqrt{8}$
- E) Not enough information.

Answer: _____

Rationale:

(4)

A battleship simultaneously fires two shells with the **same** initial speed at enemy ships. The shells follow the parabolic trajectories shown.



Which ship gets hit first?

- A) A
- B) B
- C) Both are hit simultaneously
- D) Not enough info is given

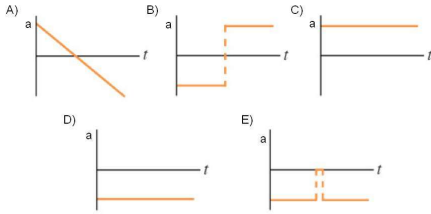
Answer: _____

Rationale:

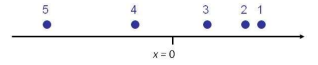
The ball rolls up the ramp, then back down.



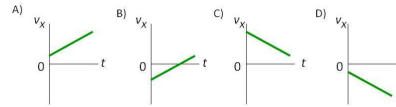
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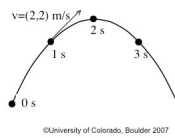


A physics student on Planet Meepzorp throws a ball that follows the parabolic trajectory shown. The ball's position is shown at 1 second intervals.

At $t=1$ s, the ball's velocity is $v = (2i + 2j)$ m/s.

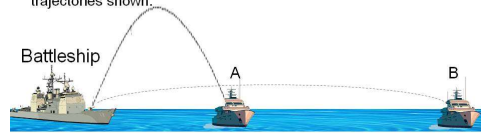
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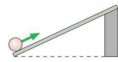
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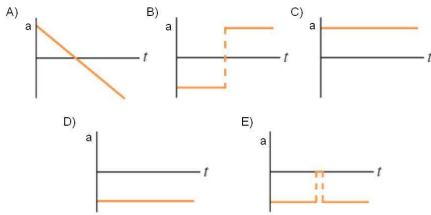
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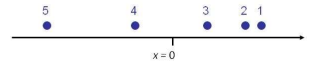
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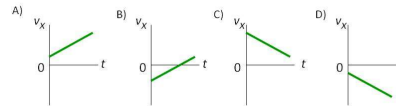
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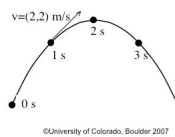


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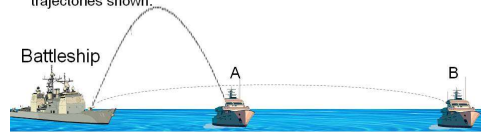
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