

Time Limit: 5 minutes

Instructions: Closed book. Closed notes. No calculator allowed.

Instructions for all quizzes: **Do not discuss any aspect of this quiz with other midshipmen until after 6th period.**

Print your last name above. Also, fill in the bubble for your section.

Fill the bubble for the correct answer. Also, write your answers in any blanks provided.

Your work will not be graded unless the instructions request you show your work.

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1. Complete the formula for the area of a rectangle with base x and height y . $A =$ _____

The base of a certain rectangle is always increasing at the rate of 2 m/hr, but the area remains constant at 48 m².

At a certain instant the base of the rectangle is 4 m.

2. What is the height of the rectangle at this instant?

$y = 4$ $y = 6$ $y = 8$ $y = 12$ $y = 16$

3. What can we say about how the height of the rectangle is changing at this same instant?

FILL IN A BUBBLE—AND A BLANK, IF APPROPRIATE.

- We cannot say anything definitive
 The height is not changing
 The height is decreasing at some rate we cannot determine
 The height is increasing at some rate we cannot determine
 The height is decreasing at the rate _____
 The height is increasing at the rate _____