

Post Video Questions

Please answer each of these questions to the best of your ability. You are welcome to re-watch parts of any of the videos to help you.

Problem 1

Suppose Jason is sailing his boat straight across a lake at a constant rate of 0.12 meters/second.

- (a) Let Δt represent a change in the number of seconds elapsed during some part of Jason's ride and let Δd represent the corresponding change in the number of meters Jason traveled. Write an equation that expresses the relationship between Δt and Δd . (If you use a decimal approximation, include at least 2 decimal places. You may also enter your answer unsimplified, like $1+2$.)

$$\Delta t = \boxed{?} \times \Delta d$$

- (b) Jason passes an island while traveling at this constant rate. At 10:30 AM, Jason is 3 meters past the island. At what time did Jason pass the island? (Fill in the hour in the first block and the minutes in the second block.)

$\boxed{?} : \boxed{?}$

Problem 2 Imagine you are driving on the highway and vary your speed to maintain a constant fuel efficiency. Select the choices to complete the statement to most accurately capture what it means to drive with a constant fuel economy: For ____ ____, the ____ is ____.

Learning outcomes:

Author(s):

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For **Multiple Choice:** **Multiple Choice:** the **Multiple Choice:** is **Multiple Choice:**

- | | | | |
|----------------|----------------------------------|----------------------------------|----------------|
| (a) fixed | (a) gallons | (a) gallons | (a) constant |
| (b) increasing | (b) distance | (b) distance | (b) increasing |
| (c) decreasing | (c) amount of change in gallons | (c) amount of change in gallons | (c) decreasing |
| | (d) amount of change in distance | (d) amount of change in distance | |

Problem 3 Suppose x and y represent the measures of two quantities and y changes at a constant rate of -0.9 with respect to x . As x changes from 7 to 9.5, how much does y change?