Answer on Question #73561, Physics – Mechanics, Relativity

Question:

A boat entered a marina with an initial velocity of 2.58 m/s [W 25.0 N]. over an interval of 4.00 s the captain turned the boat towards a dock while they slowed the boat to a final velocity of 1.15 m/s. what was the average acceleration of the boat during the parking sequence?

Solution:

Using formula below:

$$\upsilon = \upsilon_0 + a \cdot t$$

where υ = 1.15 m/s, υ_0 = 2.58 m/s, t = 4 s, we got:

$$a = \frac{\upsilon - \upsilon_0}{t} = \frac{1.15 - 2.58}{4} = -0.3575 \ (m/s^2)$$

Answer: a = –0.3575 m/s²

Answer provided by https://www.AssignmentExpert.com