

Quiz Za

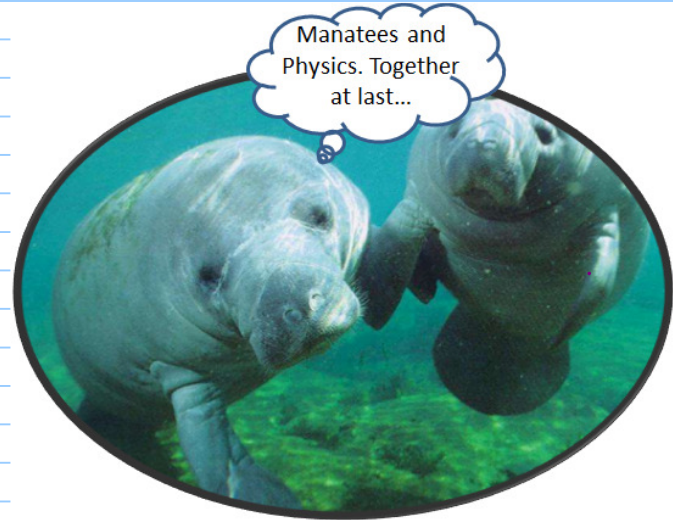
Note Title

27/09/2012

1) A manatee (a what?) can travel at a top speed of 38 km/h. If it sees some delicious grass 65 m to the West, how long will it take to reach it at this speed?

2) Another manatee (really?) travels 320 m North and then 140 m South in 48 s.

- What is its average speed?
- What is its average velocity?



1.) $v = 38 \text{ km/h} \div 3.6 = 10.56 \text{ m/s}$
 $d = 65 \text{ m}$
 $t = ?$

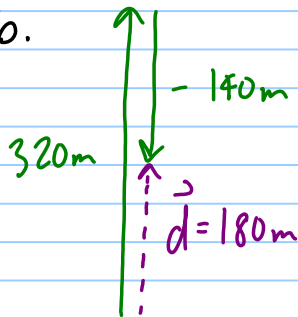
$$v = \frac{d}{t} \cdot t$$

$$\frac{v \cdot t}{v} = \frac{d}{v}$$

$$t = \frac{d}{v} = \frac{65 \text{ m}}{10.56 \text{ m/s}} = \boxed{6.2 \text{ s}}$$

2.) a. $v = \frac{d}{t} = \frac{(320 + 140) \text{ m}}{48} = 9.6 \text{ m/s}$

b.



$$\vec{v} = \frac{\vec{d}}{t} = \frac{180 \text{ m}}{48 \text{ s}} = 3.8 \text{ m/s (North)}$$