Wednesday April 13, 2011

answers pg 358 #1,3a,b,7a
re-arranging the speed formula

Warm- Up

1. If Ken drove his motorboat a distance of 1000.0 m in 7.045s, how fast was his boat moving?

$$v = \frac{d}{t} = \frac{1000.0m}{7.045s} = 141.9 \text{ m/s}$$

Answers
pg 358 #1, 3a,b,7a

1.a) average speed is the average over your entire distance whereas instantaneous is only your speed at one particular instant.

b) They are the same when speed is constant

3 a) If two hikers walk the Trans Canada trail for 6.0h and covered 31km, what is their average speed for the day?

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

d= 31km
t= 6.0h
v = ?

$$= \frac{31km}{6.0h}$$

$$= 5.2 \text{ km/h}$$

The hikers average speed is 5.2km/h

3 (b) If three bike riders on the Trail cycle for 6.0h in one day and cover 85km, what is their average speed for the day?

d = 85km
t = 6.0h

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

$$= \frac{85km}{6.0h}$$

$$= 14km/h$$

The bike riders average speed is 14km/h

7. d = 40814 km
   t = 19d 21 h 47 min

must first convert the time to all the same unit (h)

19 d   x $\underline{24\ h}$ = 456 hours   47 min x $\underline{1\ h}$ = 0.783h
            1d   60 min

21 h

Add all these together   456 h + 0.783h + 21h
                                    477.83
                           correct SD= 478 h

  v = $\underline{d}$
      t
    = $\underline{40814km}$
         478 h
    = 85.4 km/h

                The balloon's average speed was 85.4km/h

Rearrangements of the Speed formula

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

rearrange this equation for d and t

1. Carl is riding his bike. He knows that the distance is 45km and from other trips he can average 20km/h.
How long will the trip take?

2. How far (in meters) will you travel in 3 minutes running at a rate of 6 m/s?

Complete questions
   pg 358 # 3cd ,4 ,7bc, 8,9

Attachments

pg 349 3,4,6,7,9 answers.notebook