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?

d= 31km
t= 6.0h
v = ?

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

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

= 5.2 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

6. a) 92 km/h   x $\dfrac{1\ m/s}{3.6km/h}$ =   25.6 m/s

b) 21m/s   x $\dfrac{3.6\ km/h}{1\ m/s}$ = 75.6 km/h

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

must first convert the time to all the same unit (all days, all hours or all min)

19 d   x   24 h   = 456 hours   47 min x   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 = d
       t
    = 40814km
        478 h
    = 85.4 km/h

              The balloon's average speed was 85.4km/h

Attachments

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