Feb 21, 2019

answers pg 358 #1,3a,b,6,7a

re-arranging the speed formula

Warm- Up

1. If Carolyn ran 8km in a time of 55 min how fast was she travelling in km/h?

Step 1:

v =

d= 8km

t= 55min

Step 2: Do I need to convert? YES

$$55\text{min} \times \frac{\text{(want)h}}{\text{(have) min}} \times \frac{1\text{h}}{60\text{min}} = 0.92\text{h}$$

Step 3:

$$v = \frac{d}{t} = \frac{8\text{ km}}{0.92\text{h}} = 8.70\text{km/h}$$

Step 4: Carolyn was travelling a speed of 8.70 kilometers per hour.

Test next Friday Chapter 9

Answers: pg 358 #1,3a,b,6,7a

1a) average speed is the total distance divided by the total time for the entire trip, whereas instantaneous speed is your speed at only one particular moment

b) They are the same when the 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 km/h

The hikers average speed is 5.2km/h

Feb 13-1:15 PM

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

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

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

= 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

Sep 15-1:57 PM

3

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 $\underline{24\ h}$ = 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

There are two other formulas you will use when solving word problems involving speed (v)

When you are asked to find distance (how far something travelled)

d = vt

When you are asked to find time (how long something travelled for how long did it take etc)

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

Oct 15-4:09 PM

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?

Step 1 : Write down what you know on the left side with symbols and values. As well write what you want to find.

$$v = 20 km/h$$
$$d = 45 km$$
$$t = ?$$

Step 2 : Convert if nessecary

Step 3: Use the correct formula to solve

$$t = \frac{d}{v} = \frac{45 km}{20 km/h} = 2h$$

Step 4 : Write a sentence.

The trip will take 2h

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

Step 1 : Write down what you know on the left side with symbols and values. As well write what you want to find.

$$v = 6 m/s$$
$$d = ?$$
$$t = 3 min$$

Step 2 : Convert if necessary

$$3 min \times \frac{60 s}{1 min} = 180 s$$

Step 3: Use the correct formula to solve

$$d = vt = (6 m/s)(180 s)$$

Step 4 : Write a sentence. $$= 1080 m$$

You travelled 1080 meters.

Mar 17-7:16 PM

Complete questions
pg358 #3cd,4,7bc,8,9