

Tuesday Feb 14, 2012

answers pg 358 #1,3a,b,6,7a
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 in m/s and in km/h?



Answers
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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, how long something travelled etc)

$$d = vt$$

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

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

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.

$$\begin{aligned}d &= 45 \text{ km} \\v &= 20\text{km/h} \\t &= ?\end{aligned}$$

Step 2 : Convert if nessecary no need to convert units match

Step 3: Use the correct formula to solve

$$t = \frac{d}{v} = \frac{45 \text{ km}}{20\text{km/h}} = 2.25 \text{ h}$$

Step 4 : Write a sentence. Carl's trip takes 2.25 hours.

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.

$$t = 3 \text{ min}$$

$$v = 6\text{m/s}$$

$$d = ?$$

the units do not match so you need to convert min to seconds

Step 2 : Convert if nessecary

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

Step 3: Use the correct formula to solve

$$\begin{aligned} d &= vt \\ &= (6\text{m/s})(180\text{s}) \\ &= 1080 \text{ m} \end{aligned}$$

Step 4 : Write a sentence.

You travelled 1080 meters.

Complete questions

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

Attachments

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

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

answers pg 358 #3cd,4,7bc,8,9.notebook