

Name Key 2014-2015 Class _____ Date _____
Assignment Speed Practice Problems

#1 Is a car travels 400m in 20 seconds how fast is it going?

Looking for V	Solution $V = \frac{400m}{20s}$ $= 20m/s$
Given $d = 400m$ $t = 20s$	
Relationships/Formula $V = \frac{d}{t}$	

#2 How much time will it take for a bug to travel 5 meters across the floor if it is traveling at 1m/s?

Looking for t	Solution $t = \frac{d}{v}$ $t = \frac{5m}{1m/s}$ $= 5s$
Given $d = 5m$ $v = 1m/s$	
Relationships/Formula $t = \frac{d}{v}$	

#3 If you move 50 meters in 10 seconds, what is your speed?

Looking for V	Solution $V = \frac{50m}{10s}$ $= 5m/s$
Given $d = 50m$ $t = 10s$	
Relationships/Formula $V = \frac{d}{t}$	

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#4 How far can you get away from your little brother with the squirt gun filled with paint if you can travel at 3m/s and you have 15s before he sees you?

Looking for d	Solution $d = 15s(3m/s)$ $d = 45m$
Given $t = 15s$ $v = 3m/s$	
Relationships/Formula $d = tv$	

#5 You arrive in my class 45 seconds after leaving math with is 90 meters away. How fast did you travel?

Looking for v	Solution $v = \frac{90m}{45s}$ $v = 2m/s$
Given $t = 45s$ $d = 90m$	
Relationships/Formula $v = \frac{d}{t}$	

#6 How far can your little brother get if he can travel at 2.5 meters per second and in 5 seconds you will discover that his squirt gun has run out of paint?

Looking for d	Solution $d = 5s(2.5m/s)$ $d = 12.5m$
Given $v = 2.5m/s$ $t = 5s$	
Relationships/Formula $d = tv$	

#7 A plane travels 395,000 meters in 9,000 seconds. What was its speed?

<p>Looking for</p> V	<p>Solution</p> $V = \frac{395,000 \text{ m}}{9,000 \text{ s}}$ $= 43.89 \text{ m/s}$
<p>Given</p> $d = 395,000 \text{ m}$ $t = 9,000 \text{ s}$	
<p>Relationships/Formula</p> $V = \frac{d}{t}$	

#8 You need to get to class, 200 meters away, and you can only walk in the hallways at about 1.5m/s. (if you run any faster, you'll be caught for running). How much time will it take to get to your class?

<p>Looking for</p> t	<p>Solution</p> $t = \frac{200 \text{ m}}{1.5 \text{ m/s}}$ $t = 133.3 \text{ s}$
<p>Given</p> $d = 200 \text{ m}$ $v = 1.5 \text{ m/s}$	
<p>Relationships/Formula</p> $t = \frac{d}{v}$	

#9 It takes Serina 0.25 hours to drive to school. Her route is 16km long. What is Serina's average speed on her drive to school?

<p>Looking for</p> V	<p>Solution</p> $V = \frac{16 \text{ km}}{0.25 \text{ h}}$ $= 64 \frac{\text{km}}{\text{h}}$
<p>Given</p> $d = 16 \text{ km}$ $t = 0.25 \text{ h}$	
<p>Relationships/Formula</p> $V = \frac{d}{t}$	

#10 In a competition, an athlete threw a flying disk 139m through the air. While in flight, the disk traveled at an average speed of 13.0m/s. How long did the disk remain in the air?

<p>Looking for</p> t	<p>Solution</p> $t = \frac{139 \text{ m}}{13 \text{ m/s}}$ $t = 10.69 \text{ s}$
<p>Given</p> $d = 139 \text{ m}$ $v = 13 \text{ m/s}$	
<p>Relationships/Formula</p> $t = \frac{d}{v}$	

#11 If you shout into the Grand Canyon, your voice travels at the speed of sound (340m/s) to the bottom of the canyon and back, and you hear an echo. How deep is the Grand Canyon at a spot where you can hear your echo 5.2 seconds after you shout?

<p>Looking for</p> d	<p>Solution</p> $d = 5.2 \times (340 \text{ m/s})$ $d = 1768 \text{ m}$
<p>Given</p> $t = 5.2 \text{ s}$ $v = 340 \text{ m/s}$	
<p>Relationships/Formula</p> $d = tv$	

CHALLENGE: Bill and Amy want to ride their bikes from their neighborhood to school which is 14.4 kilometers away. It takes Amy 40 minutes to arrive at school. Bill arrives 20 minutes after Amy. How much faster (in meters/second) is Amy's average speed for the entire trip?

<p>Looking for</p> v	<p>Solution</p> <p>Amy $v = \frac{14.4 \text{ km}}{40 \text{ min}}$</p> $= 0.36 \frac{\text{km}}{\text{min}} \cdot \frac{1000 \text{ m}}{1 \text{ km}} \cdot \frac{1 \text{ min}}{60 \text{ s}} = 6 \frac{\text{m}}{\text{s}}$ <p>Bill $v = \frac{14.4 \text{ km}}{60 \text{ min}}$</p> $= 0.24 \frac{\text{km}}{\text{min}}$ $0.24 \frac{\text{km}}{\text{min}} \cdot \frac{1000 \text{ m}}{1 \text{ km}} \cdot \frac{1 \text{ min}}{60 \text{ s}} = 4 \frac{\text{m}}{\text{s}}$
<p>Given</p> $14.4 \text{ km} = d$ <p>Amy 40min Bill 60min</p>	
<p>Relationships/Formula</p> $v = \frac{d}{t}$	

$$6 \text{ m/s} - 4 \text{ m/s} = 2 \text{ m/s faster}$$