

Name: \_\_\_\_\_

Period: \_\_\_\_\_

**Chapter 1 and 2 Review**

**Ch 1:1 The Math Code** - Know what the variables mean, what their units are and how to read the math code (including how to rearrange equations).

$mv = m$ <u>times</u> $v$ $F/a = F$ _____ $a$ $T_2 + T_1 = T_2$ _____ $T_1$ $mv = m$ _____ $v$ $\Delta D/\Delta T = \Delta D$ _____ $\Delta T$	Match the variables with the quantities.	Equation: $S = \Delta D/\Delta T$ ; solve for $\Delta D$ .  $a = \Delta S/\Delta T$ ; solve for $\Delta S$ :  Solve for $\Delta T$ :
	1. $a =$ _____ 2. $S$ or $v =$ _____ 3. $D =$ _____ 4. $F =$ _____ 5. $T =$ _____	80 sec 3 meters/sec 43 $m/s^2$ 45 meters 22 newtons

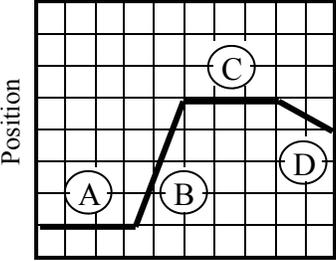
**Ch 1:2 Speed** - Know how to use and manipulate the speed equation to calculate speed, distance, and time.

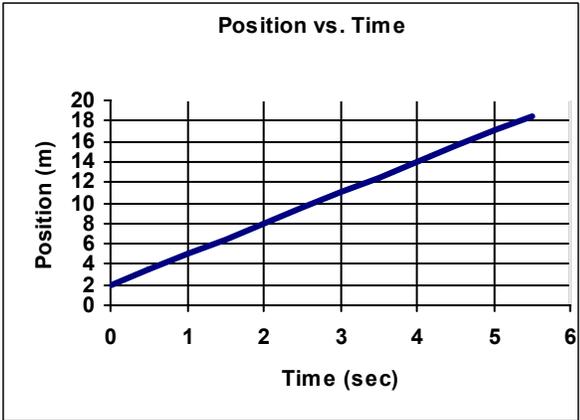
A car travels 10 m/s for 5 secs. Calculate how far it traveled.		You travel from Maine (100 miles away) to Vermont (300 miles away), in 4 hours. Calculate your speed.	
Variables:	Formula:  Solution:	Variables:	Formula:  Solution:
A bike goes 12 m/s for 6 seconds. Calculate how far the bike traveled.		You're meeting a friend at 6 p.m. She lives 180 miles away. The speed limit is 60 mph. When do you need to leave?	
Variables:	Formula:  Solution:	Variables:	Formula:  Solution:

**Ch 1:2 and 1:3 Experiments and Variables** - Know the Scientific Method; know what makes a good experiment; know the vocabulary; know the difference between an experimental variable and a control variable.

1. Experiment	A. One time an experiment is run.	Experimental or Control variable:	
2. Data Table	B. How an experiment is actually conducted.	Variables that you keep the same in an experiment:	You are studying the affects of pressure on gas absorption in a liquid. The amount of gas pressure would be:
3. Trial	C. A setup used to gather data and knowledge.	A variable that you are studying in an experiment:	The type of liquid would be:
4. Variable	D. A list of information from an experiment.	You have only one of these:	The room temperature would be:
5. Procedure	E. A part of an experiment that can be changed or manipulated.	You can have many of these:	The type of container would be:

**Ch 1:4 Slope** - Know how to calculate slope and know what slope means for a position vs. time graph and a speed vs. time graph.

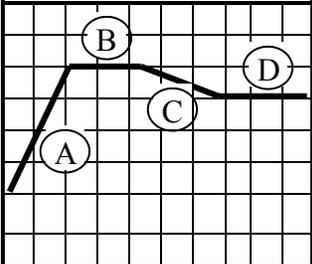
<p>1. Linear</p> <p>2. Independent variable</p> <p>3. Dependent variable</p> <p>4. Slope</p> <p>5. Speed</p> <p>6. Acceleration</p>	<p>A. The variable on the vertical axis (y-axis).</p> <p>B. The slope of a speed vs. time graph.</p> <p>C. The variable on the horizontal axis (x-axis).</p> <p>D. A type of graph that looks like a straight line.</p> <p>E. The measure of the steepness of a line.</p> <p>F. The slope of a position vs. time graph.</p>	<p style="text-align: center;"><b>Position vs. Time</b></p>  <p style="text-align: center;">Time</p> <p>Which segment is:</p> <p>At rest: _____</p> <p>Fast speed: _____</p> <p>Slow speed: _____</p> <p>Going backwards: _____</p> <p>Going forward: _____</p>
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<p style="text-align: center;"><b>Position vs. Time</b></p>  <p style="text-align: center;">Time (sec)</p>	<p>Which is the independent variable? _____</p> <p>Which is the dependent variable? _____</p> <p>Where was the object at 4 seconds? _____</p> <p>Find the slope of the graph (must show work)</p> <p>What does the slope you just found stand for? _____</p>
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**Ch 2:1 Acceleration and Average Speed** - Know how to calculate acceleration and average speed. Know the difference between speed and velocity and scalar vs. vector quantities.

<p>A person starts running from 3 m/s to 9 m/s in 2 seconds. Calculate the person's acceleration.</p>		<p>A plane stops from 300 mph in 15 seconds. Calculate the planes acceleration.</p>	
Variables:	Solve:	Variables:	Solve:
Formula:		Formula:	

Speed (S) or Velocity (V)	Scalar (S) or Vector (V)
___ A person walks 3.5 mph.	___ A 50 N force pulls on a rock.
___ A bird flies 20 m/s.	___ 10 meters down the hill.
___ A bike goes 30 m/s toward town.	___ 60 mph toward Austin.

<p style="text-align: center;"><b>Speed vs. Time</b></p>  <p style="text-align: center;">Time</p>	<p>Which graph segments fit the following:</p> <p>Constant speed: _____</p> <p>Deceleration: _____</p> <p>Accelerating: _____</p>
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