

Assignment Record Sheet

Math Core B

Full Name: _____

Week: 2/3- 2/7

Unit Name: Variables and Patterns

Period: 2

Date Assigned	Focus Question??	Homework (IP=in packet)		Meets Expectation (15 points)	Approaching Expectations (5 points)	Below Expectation (0 points)
Monday Feb. 3	<i>In what kinds of situations will the equation for the relationship between dependent and independent variables be in the form $y=x+k$? $y=x-k$? $y=kx$?</i>	WU: Unknown Variables wksht (IP) CW: Prob. 3.1 A – C p. 67 HW: ACE #22 (IP)		WU: CW: HW:		
Tuesday Feb. 4	<i>In what kinds of situations will the equation for the relationship between dependent and independent variables be in the form $y=x+k$? $y=x-k$? $y=kx$?</i>	WU: None CW: Math Review HW: None		WU: CW: HW:		
Wed. Feb. 5	<i>What is the relationship between dependent and independent variables in the equation $y=mx$?</i>	WU: Video Launch CW: Prob. 3.2 A-B (IP) HW: ACE #4 (IP)		WU: CW: HW:		
Thursday Feb. 6	<i>What is the relationship between dependent and independent variables in the equation $y=mx$?</i>	WU: Algebra wksht (IP) CW: Prob. 3.2 D p. 71 HW: ACE #2 p.76		WU: CW: HW:		
Friday Feb. 7	<i>How do you find y from an equation like $y=3x+5$ when values of x are given?</i>	WU: Video Launch CW: Prob. 3.3 A-B (IP) HW: None Turn in your packet		WU: CW: HW:		

Total Homework Score for the Week: _____/75

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Daily Materials Score _____/25



Practice Finding The Variable #2

A variable represents the unknown number in the equation. For example, $m \div 6 = 2$. The letter "m" represents the number which divides by 6 to equal 2. Find the value of each variable in these equations. See the example below.

$s \div 5 = 2$

$s = 2 \times 5$

$s = 10$

$d \div 7 = 3$

$d =$

$d =$

$n \div 6 = 6$

$n =$

$n =$

$g \div 4 = 8$

$g =$

$g =$

$p \div 9 = 2$

$p =$

$p =$

$a \div 12 = 12$

$a =$

$a =$

$j \div 25 = 3$

$j =$

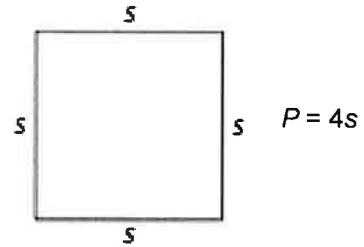
$j =$

Labsheet 3ACE

Exercise 22

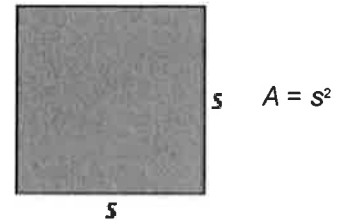
22. a. The perimeter P of a square is related to the side length s by the formula $P = 4s$.

Complete the table below showing how the perimeter of a square increases as the side length increases from 1 to 6 in 1-unit steps.



b. The area A is related to the side length by the formula $A = s^2$.

Complete the table below to show how the area of a square increases as the side length increases from 1 to 6 in 1-unit steps.



Perimeter and Area of a Square

Side Length (units)	1	2	3	4	5	6
Perimeter (units)	4					
Area (units ²)	1					

For parts (a) and (b), describe the pattern of change.

Part (a):

Part (b):

Labsheet 3.2A

Travel at Different Speeds

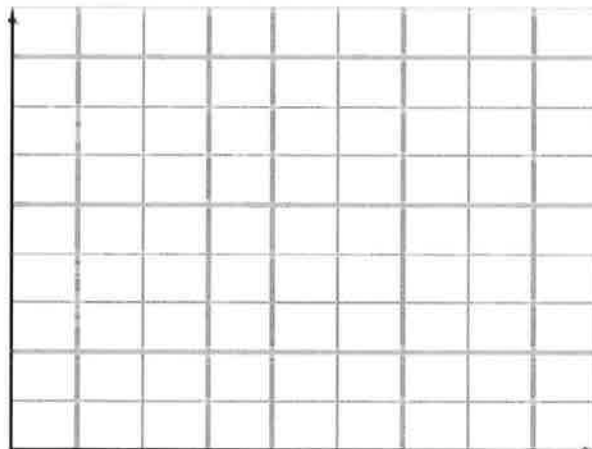
A. When the bike tour is over, the riders will put their bikes and gear into vans and head back to Atlantic City.

- Complete the rate table to show how distance depends on time for different average speeds.

Distance Traveled at Different Average Speeds

Time (h)	Distance for Speed of 50 mi/h	Distance for Speed of 55 mi/h	Distance for Speed of 60 mi/h
0	0		
1	50		
2	100		
3			
4			

- Write an equation to show how distance d and time t are related for travel at each speed.
 - 50 miles per hour
 - 55 miles per hour
 - 60 miles per hour
- Graph the (*time, distance*) data for all three speeds on the coordinate grid below. Use a different color for each speed.



Labsheet 3.2B

Smartphone Monthly Charges

- B. A smartphone plan charges \$.03 per text message.
1. a. Complete the table of monthly charges for 0; 500; 1,000; 1,500; 2,000; and 2,500 text messages.

Smartphone Monthly Charges

Number of Text Messages	0	500	1,000	1,500	2,000	2,500
Cost						

- b. Use the table. What is the cost for 1,000 messages?

For 1,725 messages?
- c. Use the table. How many text messages were sent in a month if the charge for the messages is \$75?

If the charge is \$60?

If the charge is \$18?

2. a. How is the monthly charge B for text messages related to the number of text messages n ? Write an equation that represents the monthly charge for n messages.

- b. Use the equation you wrote in part (a) to find the cost for 1,250 text messages in one month.

clw

Labsheet 3.2B

Smartphone Monthly Charges

3. a. Sketch a graph of the relationship between text message charges and number of messages.

Smartphone Monthly Charges

- b. Explain how you could use the graph to answer the questions in parts (1b), (1c), and (2b).

h/w

Labsheet 3ACE

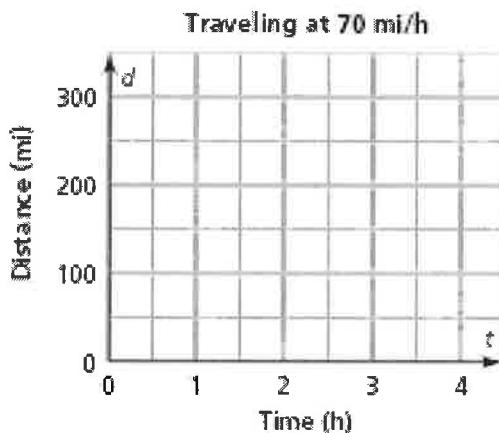
Exercise 4

4. The equation $d = 70t$ represents the distance in miles covered after traveling at 70 miles per hour for t hours.
- a. Make a table that shows the distance traveled every half hour from 0 hours to 4 hours.

Traveling at 70 mi/h

Time (h)	0	0.5	1	1.5	2	2.5	3	3.5	4
Distance (mi)									

- b. Sketch a coordinate graph that shows the distance traveled between 0 and 4 hours.



- c. What is d when $t = 2.5$ hours? Explain how you found your answer.
- d. What is t when $d = 210$ miles? Explain how you found your answer.
- e. You probably made your graph by plotting points. In this situation, would it make sense to connect these points?

Algebra Action!

Value of The Expression

w/u
2/6/20
Per. 2

A variable represents the unknown number in the expression or equation.
For example, $4 \times t = 12$. The letter "t" represents the number which multiplies by 4 to equal 12.

An expression in math is a sentence containing numbers and the operations. Below are examples of expressions:

$2 + 3$

$17 - 16 + 2$

$\frac{2}{5}x$

6

$(3 \times 5) - (6 \times 2)$

$y - 20$

We can find the value of the expression $7 + y$ by placing the variable with the number.
For example: if $y = 5$

1. Put 5 in the place of y

$$\begin{array}{c} 7 + y \\ 7 + 5 \end{array}$$

2. Calculate it

$7 + 5 = 12$

Find the value of the expressions below. Show your work.

$17 - h$

If $h = 4$

$4 + y + 7$

If $y = 8$

$(12 - b) + 5$

If $b = 3$

$(5 \times m) + 1$

If $m = 6$

$(4 \times p) \times 2$

If $p = 10$

$20 + (6 \times w)$

If $w = 3$

Labsheet 3.3A

Wild World Admission Prices

Liz and Theo want to visit Wild World with their friends. Theo checks if the park offers special prices for groups larger than 3 people. He finds this information on the park's Web site:



A. Study the rule.

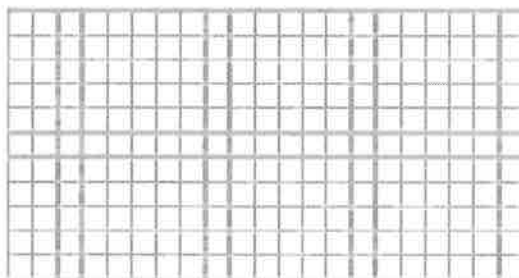
1. a. Complete the table to show the admission price for groups of size 4, 8, 12, 16, 20, 24, 28, 32, 36, and 40 people.

Wild World Admission Prices

Number in Group	4	8	12	16	20	24	28	32	36	40
Price										

Then sketch a graph of the data on the coordinate grid below.

Wild World Admission Prices



- b. Describe the pattern of change that shows up in the table and graph.

Labsheet 3.3B

Wild World Bonus Card

B. Admission to Wild World includes a bonus card with 100 points that can be spent on rides. Rides cost 6 points each.

- Complete the table below to show a customer's bonus card balance after various numbers of rides.

Bonus Card Balance

Number of Rides	0	1	2	3	5	7	10	15
Points on Card	100							

- Explain how you can calculate the number of points left after any number of rides.

- Write an equation showing the relationship between points left on the bonus card and number of rides taken.

- How does cost per ride appear in the equation?

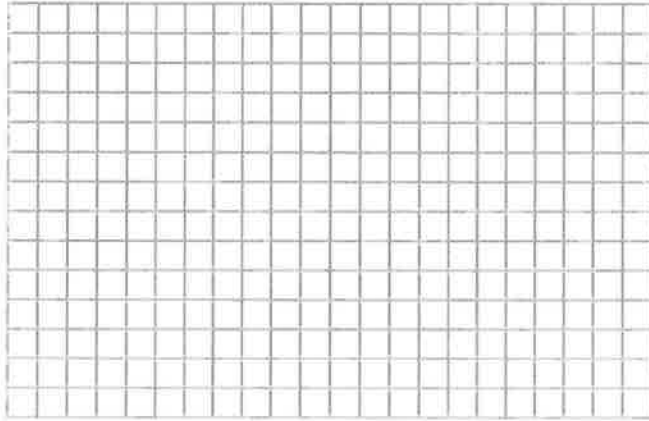
How does the number of bonus points at the start appear in the equation?

Labsheet 3.3B

Wild World Bonus Card

5. Sketch a graph of the relationship between points left and number of rides for up to 20 rides.

Bonus Card Balance



Describe the relationship between the variables.