

Assignment Record Sheet

Math Core B

Full Name: _____

Week: 1/6-1/10

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 Jan. 6	<i>How can you construct a graph from a table that depicts change over time?</i>	WU: None CW: Math Review HW: None		WU: CW: HW:		
Tuesday Jan. 7	<i>How can you construct a graph from a table that depicts change over time?</i>	WU: Vocabulary (IP) CW: Prob. 1.1 A, B, & E (IP) Video Launch HW: ACE #1 p. 20		WU: CW: HW:		
Wed. Jan. 8	<i>What are the advantages and disadvantages of tables and graphs in representing the pattern of change in a variable?</i>	WU: Vocabulary (IP) CW: Prob. 1.2 A-B p. 13 HW: ACE #9 (IP)		WU: CW: HW:		
Thursday Jan. 9	<i>Which representation seems to best show patterns of change: table, graph, or notes?</i>	WU: Vocabulary (IP) CW: Prob. 1.3 A-B (IP) Video Launch HW: ACE #10 (IP)		WU: CW: HW:		
Friday Jan. 10	<i>How do you calculate average speed for a trip? How do a table or graph show speed?</i>	WU: Vocabulary (IP) CW: Prob. 1.4 A-B p. 19 HW: None Turn in your packet		WU: CW: HW:		

Total Homework Score for the Week: _____/75

--	--	--	--	--

Daily Materials Score _____/25

Variables and Patterns

Complete the vocabulary chart by filling in the missing information.

Term	Definition	Example
variable	A quantity that can change.	
average speed	The number of miles per hour averaged over an entire trip.	
dependent variable	One of the two variables in a relationship. Its value depends upon another variable.	
independent variable	One of the two variables in a relationship. Its value determines the value of the dependent variable.	
income	The amount of money you take in.	
profit	The amount by which income is greater than expenses.	
coefficient	The numerical factor in any term of an expression.	

Variables and Patterns (continued)

Term	Definition	Example
equation	A rule containing variables that represent a mathematical relationship.	$\frac{2}{7} = \frac{x}{42}$
expression	A mathematical phrase containing numbers, variables, and operation symbols.	
rate of change	The amount of change in the dependent variable produced by a given change in the independent variable.	
equivalent expressions	Expressions that represent the same quantity.	$2+5$ & $3+4$
term	A number, a variable, or the product of a number and a variable.	
solution of an equation	The value or values of the variables that make an equation true.	

Labsheet 1.1

Jumping Jack Fitness Test

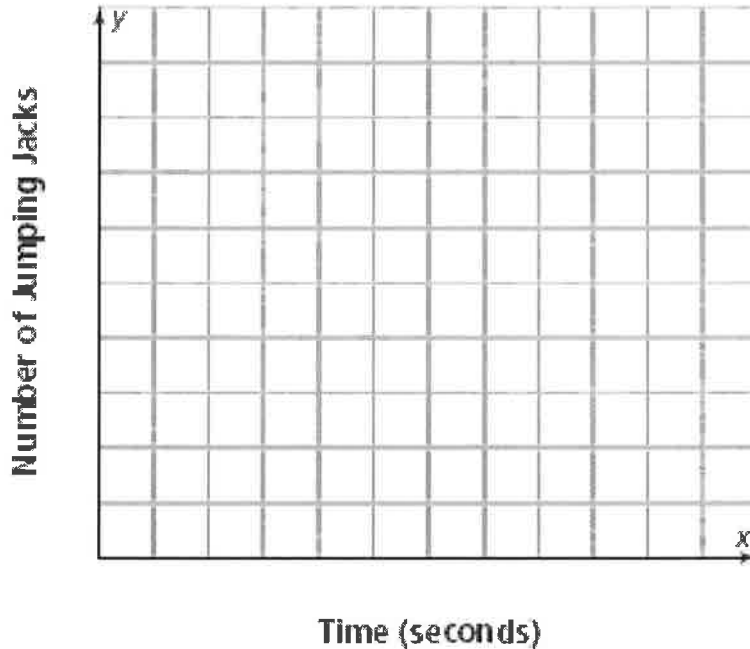
- A. Do the jumping jack fitness test with help from a timer, a counter, and a recorder. Enter the total number of jumping jacks after every 10 seconds in the data table shown below:

Jumping Jack Experiment

Time (seconds)	0	10	20	30	40	50	60	70	80	90	100	110	120
Total Number of Jumping Jacks													

- B. Record your data on the coordinate grid shown below.

Jumping Jacks Over Time



Labsheet 1.1

Jumping Jack Tables and Graphs

E. One group said, "Our jumper did 8 jumping jacks for every 10 seconds."

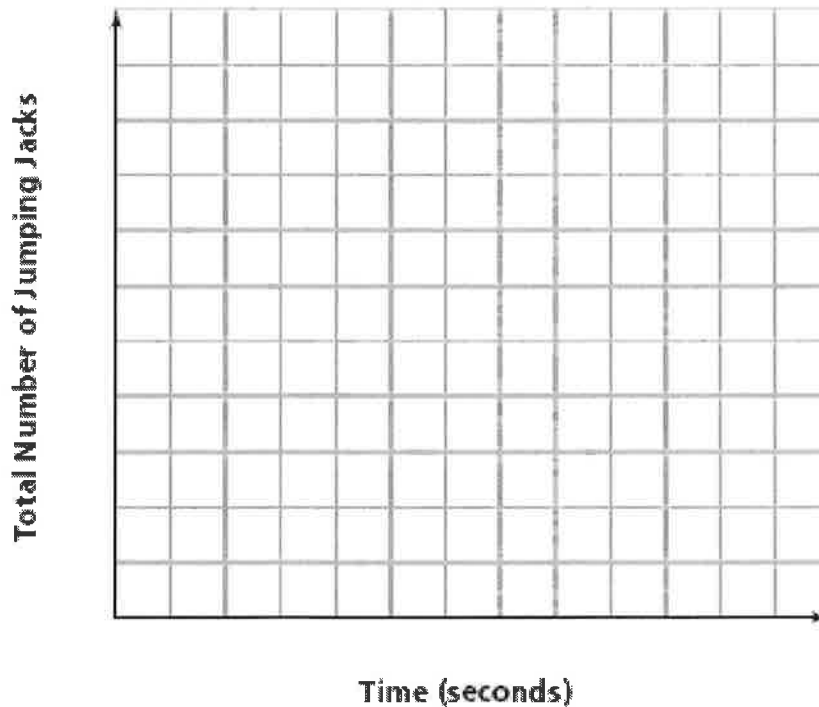
1. a. Complete the table below to show results if a student jumped at a steady pace matching that ratio over 60 seconds.

Jumping Jack Experiment

Time (seconds)	0	10	15	20		30		40		50		60
Total Number of Jumping Jacks		8	12		20		28		36		44	

- b. Plot the points corresponding to *(time, jumping jack total)* pairs in the table on the coordinate grid shown below.

Jumping Jack Experiment

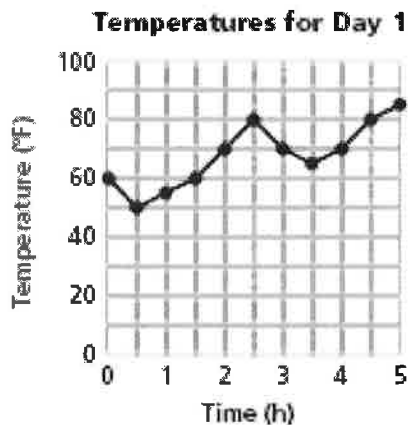


Describe the pattern you see.

Labsheet 1ACE

Exercise 9

9. Here is a graph of temperature data collected on the Ocean Bike Tours test trip from Atlantic City to Lewes.



- a. Complete the table of *(time, temperature)* data from this graph.

Temperatures for Day 1

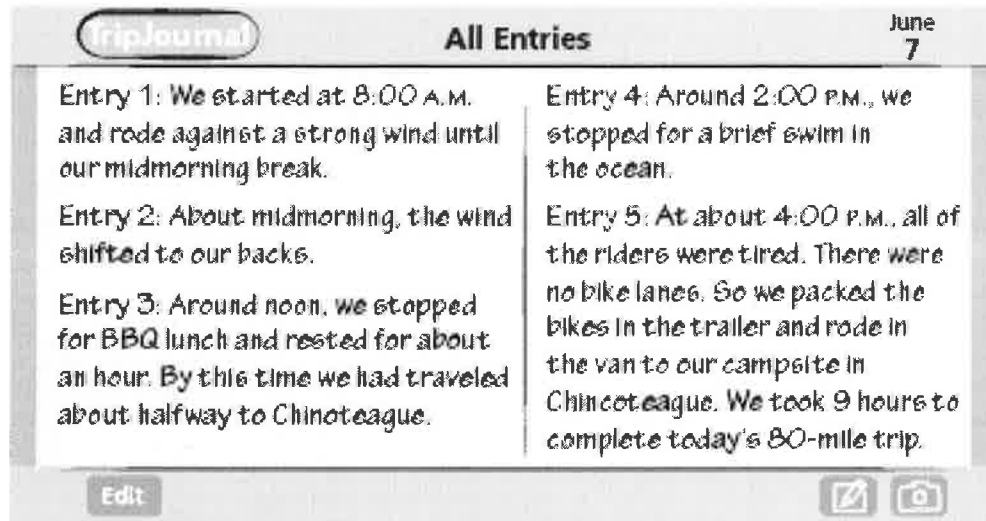
Time (h)	0	1	2	3	4	5
Temperature (°F)						

- b. What is the difference between the day's lowest and highest temperatures?
- c. During which time interval(s) did the temperature rise the fastest?
- During which time interval did it fall the fastest?
- d. Do you prefer using the table or the graph to answer questions like those in parts (b) and (c)? Explain your reasoning.
- e. What information can you get from the lines connecting the points?

Labsheet 1.3

Malcolm and Liz's Data

Malcolm and Liz drove the tour van on the way from Lewes to Chincoteague. They forgot to record time and distance data. Fortunately, they wrote some notes about the trip.

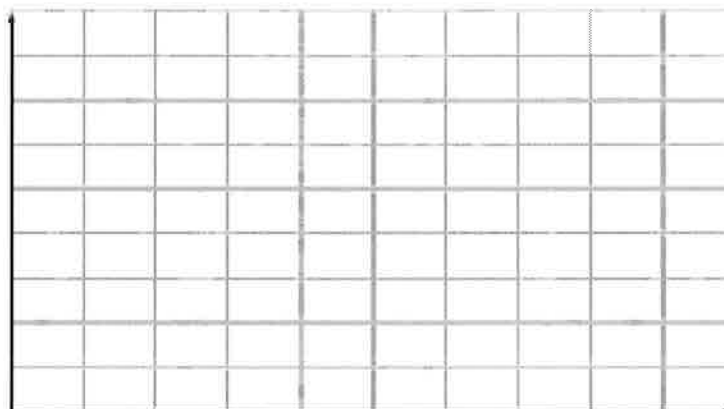


A. Complete the table of (*time*, *distance*) values to match the story told in Malcolm and Liz's notes.

Lewes to Chincoteague

Trip Time														
Distance														

B. Sketch a coordinate graph that shows the information in the table.



Does it make sense to connect the points on the graph? Explain your reasoning.

h/w

Labsheet 1.ACE Exercise 10

10. Make a table and a graph of (*time, temperature*) data that fit the following information about a day on the road:

- We started riding at 8 A.M. The day was quite warm, with dark clouds in the sky.
- About midmorning, the temperature dropped quickly to 63°F, and there was a thunderstorm for about an hour.
- After the storm, the sky cleared and there was a warm breeze.
- As the day went on, the sun steadily warmed the air. When we reached our campground at 4 P.M. it was 89°F.

Hint: There is no one right answer. Time and Temperature may not be exact numbers in this problem, so you will need to use the clues to make reasonable estimates.

A Day on the Road

Time (x)	Temperature °F (y)
8 A.M.	quite warm _____ °
9 A.M.	
10 A.M. (midmorning)	
11 A.M.	
12 NOON	
1 P.M.	
2 P.M.	
3 P.M.	
4 P.M.	

A Day on the Road

