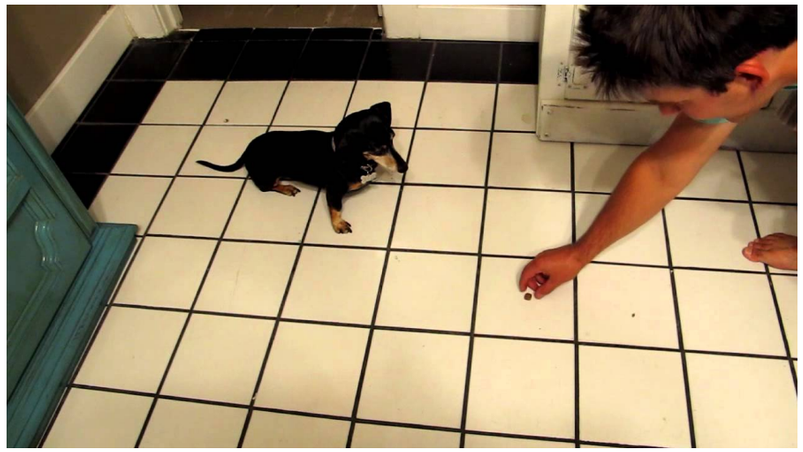
Welcome to the Chapter 3 Section 7 Digital Notes

Use your iPad and Apple Pencil to complete the tasks on each sheet of this document.

Please insert your name here.

Watch the video below:



Use your Apple Pencil or the text function to describe what you observe happening in the video. Write or type your answer on the lines below.

_____

_____

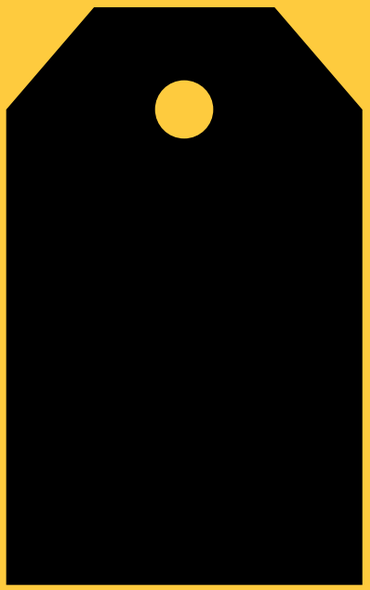
_____

Author: Wendy Martin

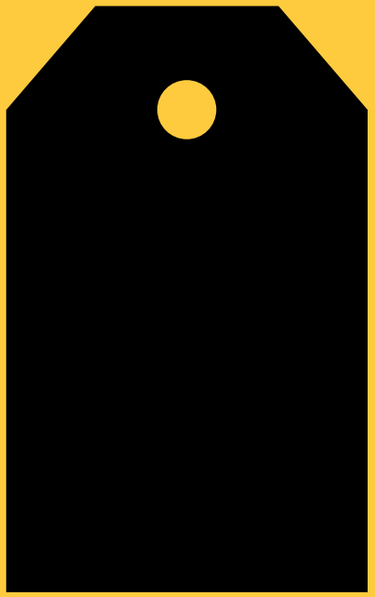
GOALS:
Solve direct variation problems.
Solve inverse variation problems.

Use your Apple Pencil eraser to “scratch off” a portion of each tag below and reveal the answers for each question.

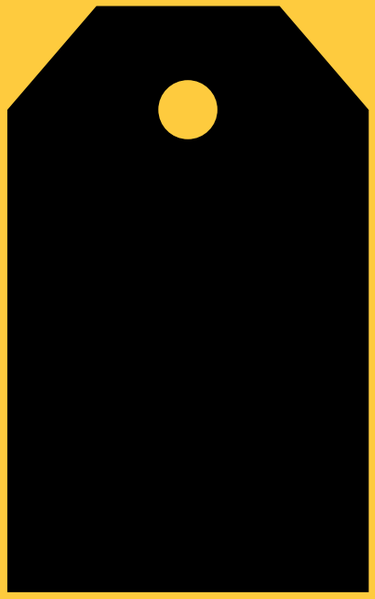
What does it mean to have a directly proportional relationship between two quantities?



What do we call the common multiplier in a direct variation equation?



Why is it useful to know that we have a directly proportional relationship between values?



GOALS:
Solve direct variation problems.
Solve inverse variation problems.

After you read the real-world situation use your Apple Pencil to write solutions to the questions below.

We are planning a cross country driving trip to San Diego, CA. The distance from Wise, VA is about 2,500 miles. If we are able to average a speed of 50 miles per hour (and we drive nonstop). Can we find out how many hours it will take to get to San Diego?

What equation would we use to determine the drive time?

_____

What would happen to the drive time if we were able to drive faster than an average of 50mph?

_____

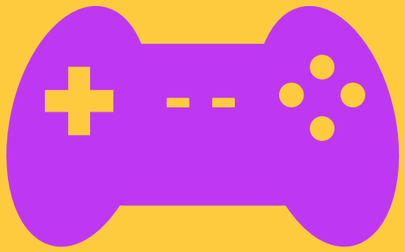
So when one of the quantities (speed) increases, then other quantity (time)

_____.

This is an example of _____ variation.

GOALS:
Solve direct variation problems.
Solve inverse variation problems.

Can you describe a situation where one increasing quantity will decrease a related quantity? Use the images below to describe how the activity or things related to the activity may have one quantity increasing while another decreases. Write or type your thoughts below.



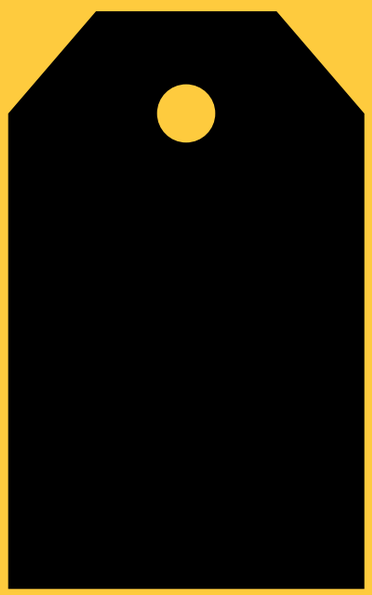
GOALS:
Solve direct variation problems.
Solve inverse variation problems.

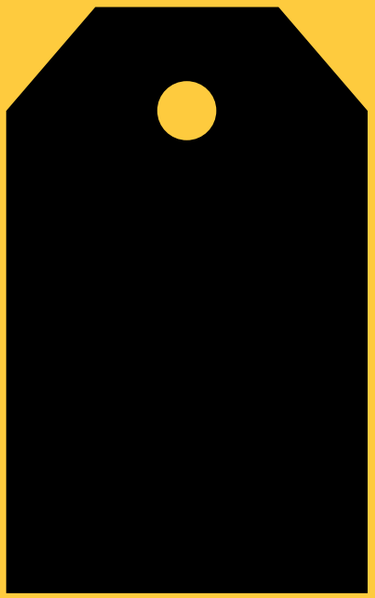
Use your Apple Pencil eraser to “scratch off” a portion of each tag below and reveal the answers for each question.

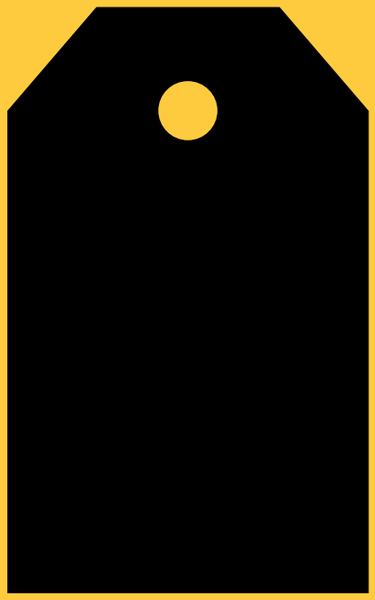
What does it mean to have an inversely proportional relationship between two quantities?

What do we call the common multiplier in an inverse variation equation?

Why is it useful to know that we have an inversely proportional relationship between values?







GOALS:
Solve direct variation problems.
Solve inverse variation problems.

Let's make an easy connection between inverse relationships and predicting values:

In simple terms, with only numbers.....this means that if y varies inversely as x and we know
y = 6 when x = 3.....we can find y when x = 9.

SOLUTION:
We will use an input/output table. Determine the missing values and replace each question mark with a value. If the value is correct, it will be shaded green.

Inverse Variation—When one quantity increases another decreases.

INPUT	OUTPUT
1	18
2	9
3	?
6	?
9	?

GOALS:
Solve direct variation problems.
Solve inverse variation problems.

THE TIME IT TAKES YOU TO GET TO CAMPUS VARIES INVERSELY AS YOUR DRIVING SPEED. AVERAGING 20MPH IN BAD TRAFFIC, IT TAKES YOU 1.5 HOURS TO GET TO CAMPUS. HOW LONG WOULD THE TRIP TAKE AVERAGING 50MPH?
(Write your solution below with your Apple Pencil using what you know about inverse relationships.)

GOALS:
Solve direct variation problems.
Solve inverse variation problems.

In your own words, compare and contrast Directly Proportional Relationships and Inversely Proportional Relationships. Use your Apple Pencil to write your response in the box below.

For **EXTRA CREDIT**, draw and label a Venn diagram that shows Directly Proportional Relationships and Inversely Proportional Relationships. Use your Apple Pencil to write your response in the box below.