Guided Notes 1

3.1 Graphing Relations & 3.2 Understanding Relations and Functions

These notes are to be completed with the video "A4-1 Graphing Relationships".

3.1 Graphing Relationships

I. Interpreting Graphs

To understand a graph to a given situation, use _____.

Example: Leaves falling off of a tree.

(Do copy this down!)

Draw the graphs from the video in the boxes below:

Graph A	Graph B	Graph C

Why does graph A not represent the example?

Why does Graph C not represent the example?

Explain why graph B best represents the example.

Fill in the table from the video.

Keywords	Segment Description	Graphs

Example: Air temperature increased steadily for several hours then remained constant. At the end of the day, the temperature increased slightly before dropping sharply. Choose the best graph that represents the situation.

Draw Graphs A, B & C

Graph A	Graph B	Graph C

What graph best represents the situation?

II. Vocabulary (Fill in the missing words):

***Continuous Graph*:** Graphs of _____ or curves.

Discrete Graph: Graph are only _____.

III. Sketching Graphs (Draw the graphs for each example and state whether it's continuous or discrete. Label the X and Y axis.)

A. Example 1: A truck driver enters a street, drives at a constant speed, stops at a light, and then continues.

Sketch the graph:

Is it continuous or discrete?

B. Example 2: A small book store sold between 5 and 8 books each day for 7 days.

Sketch the graph:

Is it continuous or discrete?

C. Example 3 (Example 2b from video): Jamie is taking an 8-week keyboarding class. At the end of each week, she takes a test to find the number of words she can type per minute. She improves every week.

Sketch the graph:

Is it continuous or discrete?

D. Example 4: Henry begins to drain a water tank by opening a valve. Then he opens another valve. Then he closes the first valve. He leaves the second valve open until the tank is empty.

Sketch the graph:

E. Example 5 (Example 3 from the video): Write a possible situation for the speed and time graph shown in the video.

F. Example 6: Write a possible situation for the second graph (in Example 3) from the video.

3.2: Understanding Relations and Functions (In Class Notes during question time)

I. Vocabulary:

A. Relation: A set of ordered pairs (x,y) where x is the input value and y is the output value.

B. Domain: All possible inputs of a relation.

C. Range: All possible outputs of a relation.

D. Function: A type of relation in which there is only one output value for every input value.

II. Vertical Line Test

A. What is the vertical line test?
B. **Write down the definition given in class below:**