

**Week 11: 10/26-10/30 Math I**

**Due: 11/02**

**Objectives:**

1. To represent mathematical relationships using graphs.
2. To identify and represent patterns that describe linear functions.
- 3.
- 4.
- 5.
- 6.

**Monday:**

**In Class:**

**CLASS CANCELLED**

**Homework:**

**NONE**

**Tuesday:**

**In Class:**

**Section 2-1: Warm Up "Solve It" Problem (found on Tuesday's homework sheet attached), Notes in composition book and complete #1-7.**

**Homework:**

**Section 2-1: Complete 2-1 handout attached**

**Wednesday:**

**Go to text website: [www.pearsonsuccessnet.com](http://www.pearsonsuccessnet.com)**

**Click on section 2-2 and WATCH online problems 1-2 and complete "Got It's" that follow.**

**THESE WILL BE CHECKED THURSDAY AND POINTS WILL BE DEDUCTED IF NOT COMPLETE.**

**Thursday:**

**In Class:**

**Section 2-2: Notes in composition book**

**Homework:**

**Section 2-2: #5-9, 11**

**Complete Vocabulary Handout attached**

**Friday:**

**Go to text website: [www.pearsonsuccessnet.com](http://www.pearsonsuccessnet.com)**

**Click on section 2-3 and WATCH online problems 1-3 and complete "Got It's" that follow.**

**THESE WILL BE CHECKED MONDAY AND POINTS WILL BE DEDUCTED IF NOT COMPLETE.**

**Complete Vocabulary Handout attached.**



Example 3: Sketching a Graph

Suppose you start to swing yourself on a playground swing. You move back and forth and swing higher in the air. Then you slowly swing to a stop. What sketch of a graph could represent how your height from the ground might change over time? Label each section.

If you jumped from the swing instead of slowly swinging to a stop, how would the graph in part (a) be different? Explain.

2-1

# Tuesday's Homework

## Algebra Section Notes 4.1 - Using Graphs to Relate Two Quantities

### Opening Activity: Tuesday warm-up

Graphs help you to see relationships that have been described in other ways.

The graphs below relate the height of the water to the volume of the water in each container. Which graph goes with which container? Justify your reasoning.

Draw lines to match the graph with its container. Be ready to explain why you matched them as you did.

### Lesson Objectives:

- To read a graph of a real-world situation
- To sketch a graph of a real-world situation

### Reading Graphs:

An important life skill is to be able to read a graph. When looking at a graph, you should look at the labels on the axes, and the general shape of the graph.

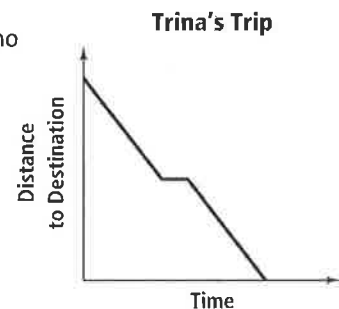
What information can you determine from the graph to the right?

The title tells you...

What are the variables involved in this situation? (What do the axes tell you?)

What information does the shape of the graph tell you?

How do variables and labels differ?



# Tuesday HW 2-1

## Sketching Graphs:

Steps:

- 1) Determine the variables involved. Which is dependent (y) and which is independent (x)?
- 2) Determine the type of graph used – “L” shaped or regular. Will there be negative values?
- 3) Draw the graph and label the sides and provide a title.
- 4) Think of reasonable values (ordered pairs) that might occur and plot them. Then connect the points with an appropriate line/curve.

Sketch a graph to describe each situation.

7. The number of apples on a tree over one year

8. The amount of milk in your bowl as you eat cereal

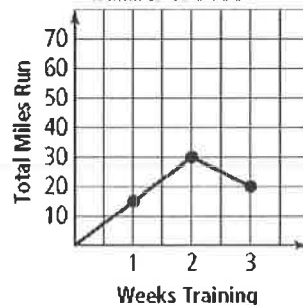
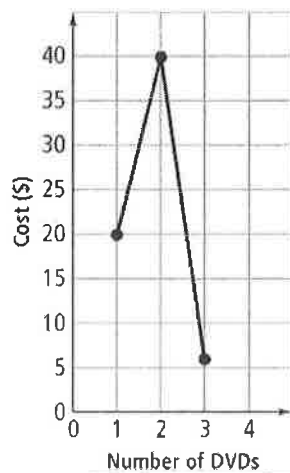
9. Your distance from home plate as you round the base

10. The oven temperature as you prepare a cake

## Error Analysis/Critical Thinking:

11. DVDs cost \$19.99 each for the first 2 purchased. After that, they cost \$5.99 each. Describe and correct the error in sketching a graph to represent the relationship between the total cost and the number of DVDs purchased.

12. During the first 2 weeks of training, Shelly ran 15 miles per week. Then, she increased to 20 miles per week. Describe and correct the error in sketching a graph to represent the relationship between the weeks and the total number of miles she has run.



~~Homework HW 5-23 over~~

# Thursday Notes: cut out + put in comp. book

Vocabulary:

Dependent Variable:

Independent Variable:

Inputs:

Outputs:

Function:

Linear Function:

Example 1:

For each diagram, find the relationship between the number of shapes and the perimeter of the figures they form. Represent this relationship using a table, words, and equation, and a graph.



Table:

Words:

Equation:

Graph:

Thursday Notes: cut out + put in comp book

2.



Table:

Words:

Equation:

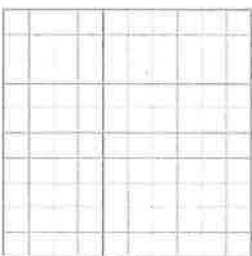
Graph:

Example 2:

For each table, determine whether the relationship is a linear function. Then represent the relationships using words, and equation, and a graph.

1.

x	y
0	5
1	8
2	11
3	14

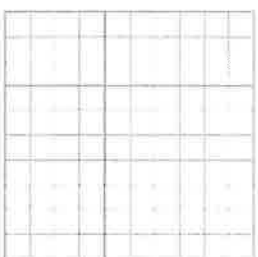


Words:

Equation:

2.

x	y
0	43
1	32
2	21
3	10



Words:

Equation:

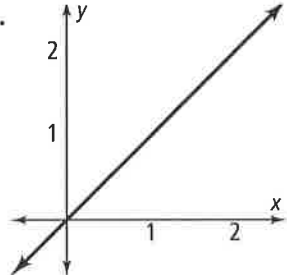
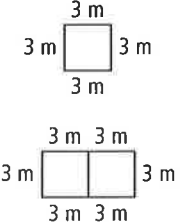
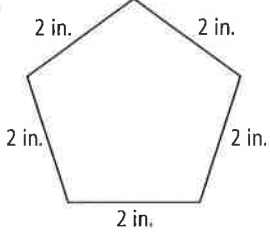
## Additional Vocabulary Support 2-2

### Patterns and Linear Functions

#### Concept List

dependent variable	function	geometric relationship
independent variable	input	linear function
ordered pairs	output	perimeter

Choose the concept from the list above that best represents the item in each box.

<p>1. (1,2), (2, 4)</p>	<p>2. </p>	<p>3. <table border="1" data-bbox="1019 709 1263 867"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>2</td> <td>4</td> </tr> <tr> <td>3</td> <td>6</td> </tr> </tbody> </table></p>	x	y	1	2	2	4	3	6								
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## Additional Vocabulary Support 2-3

### Patterns and Nonlinear Functions

Use the list below to complete the Venn diagram.

A function whose graph is not a line or part of a line	A function whose graph is a line or part of a line	The graph can be a curve.
These graphs represent constant rates of change.	The points do not lie on a line.	Each input is paired with exactly one output.

