

U4: L11 - L14 Homework Packet

Due: \_\_\_\_\_

Name: KEY  
Hour: \_\_\_\_\_

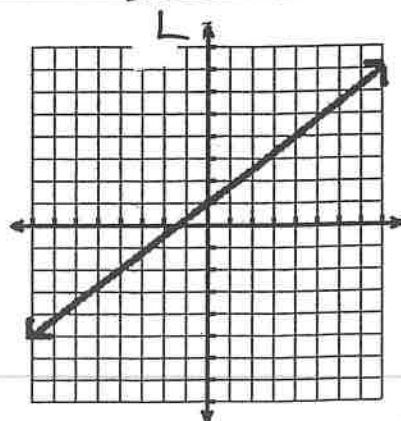
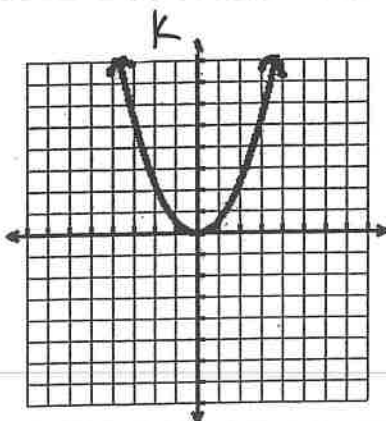
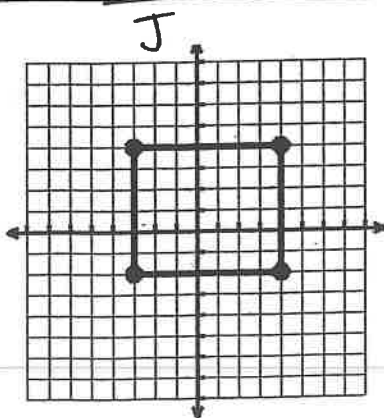
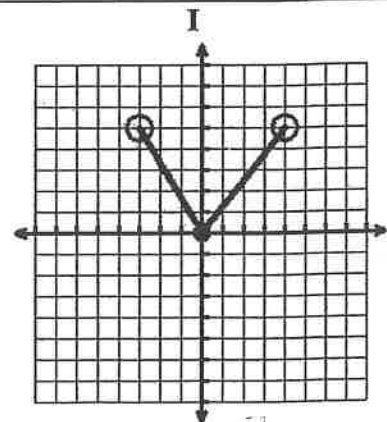
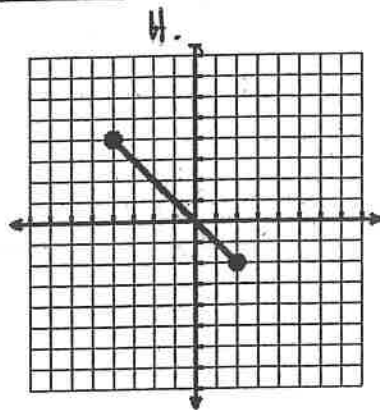
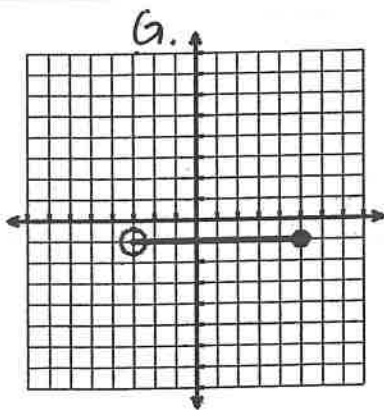
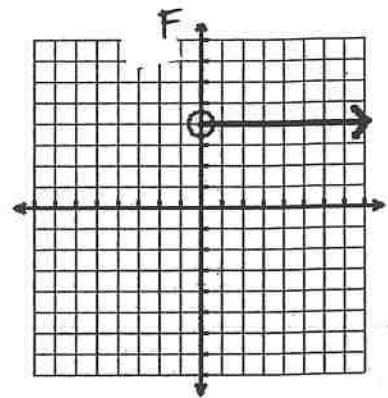
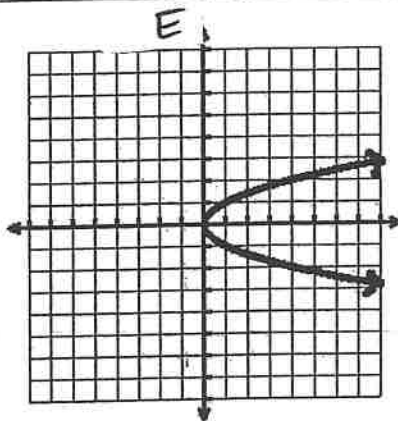
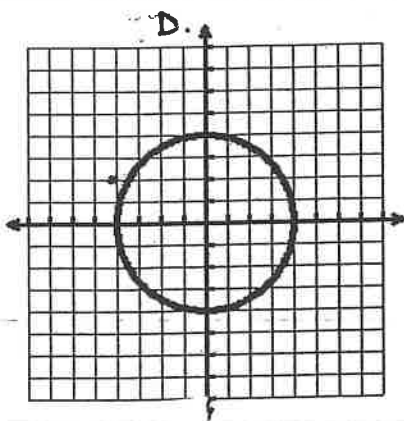
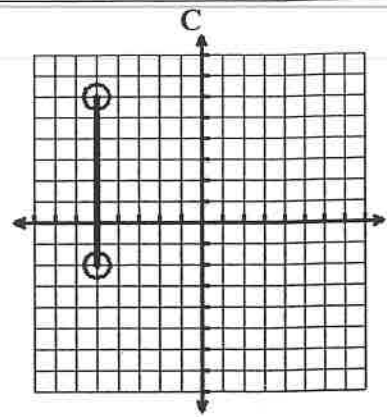
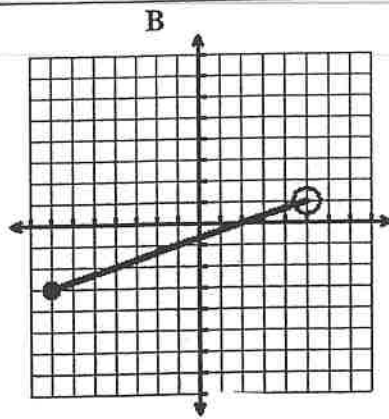
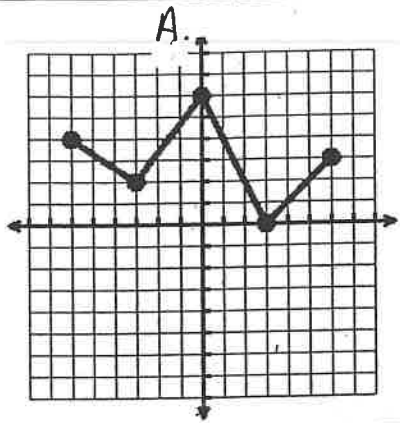
## DOMAIN AND RANGE MATCHING ACTIVITY

Read the attached page of notes first below beginning this activity. It gives you examples of domain and range problems just like these.

Match each domain and range given in this table with a graph labeled from A to L on the attached page. Only use Graphs A – L for this page. Write the letter of your answer in the blank provided for each problem.

<p><u>D</u> 1.</p> <p>Domain: <math>\{-4 \leq x \leq 4\}</math></p> <p>Range: <math>\{-4 \leq y \leq 4\}</math></p> <p>Function: Yes/No?</p>	<p><u>G</u> 2.</p> <p>Domain: <math>\{-3 &lt; x \leq 5\}</math></p> <p>Range: <math>\{y = -1\}</math></p> <p>Function: Yes/No?</p>	<p><u>H</u> 3.</p> <p>Domain: <math>\{-4 \leq x \leq 2\}</math></p> <p>Range: <math>\{-2 \leq y \leq 4\}</math></p> <p>Function: Yes/No?</p>
<p><u>F</u> 4.</p> <p>Domain: <math>\{x &gt; 0\}</math></p> <p>Range: <math>\{y = 4\}</math></p> <p>Function: Yes/No?</p>	<p><u>A</u> 5.</p> <p>Domain: <math>\{-6 \leq x \leq 6\}</math></p> <p>Range: <math>\{0 \leq y \leq 6\}</math></p> <p>Function: Yes/No?</p>	<p><u>C</u> 6.</p> <p>Domain: <math>\{x = -5\}</math></p> <p>Range: <math>\{-2 &lt; y &lt; 6\}</math></p> <p>Function: Yes/No?</p>
<p><u>E</u> 7.</p> <p>Domain: <math>\{x \geq 0\}</math></p> <p>Range: <math>\{\text{all real numbers}\}</math></p> <p>Function: Yes/No?</p>	<p><u>J</u> 8.</p> <p>Domain: <math>\{-3 \leq x \leq 4\}</math></p> <p>Range: <math>\{-2 \leq y \leq 4\}</math></p> <p>Function: Yes/No?</p>	<p><u>L</u> 9.</p> <p>Domain: <math>\{\text{all real numbers}\}</math></p> <p>Range: <math>\{\text{all real numbers}\}</math></p> <p>Function: Yes/No?</p>
<p><u>B</u> 10.</p> <p>Domain: <math>\{-7 \leq x &lt; 5\}</math></p> <p>Range: <math>\{-3 \leq y &lt; 1\}</math></p> <p>Function: Yes/No?</p>	<p><u>K</u> 11.</p> <p>Domain: <math>\{\text{all real numbers}\}</math></p> <p>Range: <math>\{y \geq 0\}</math></p> <p>Function: Yes/No?</p>	<p><u>I</u> 12.</p> <p>Domain: <math>\{-3 &lt; x &lt; 4\}</math></p> <p>Range: <math>\{0 \leq y \leq 5\}</math></p> <p>Function: Yes/No?</p>

USE THESE GRAPHS TO ANSWER QUESTIONS 1 – 12.

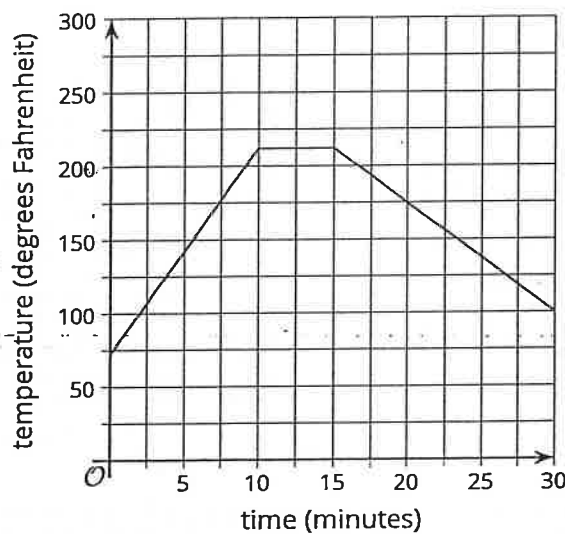


## Lesson 11: Domain and Range (Part 2)

### Cool Down: A Pot of Water

The function  $W$  gives the temperature, in degrees Fahrenheit, of a pot of water on a stove  $t$  minutes after the stove is turned on. After 30 minutes, the pot is taken off the stove.

The graph of the function is shown.



1. Is 250 in the range of function  $W$ ?  
Explain how you know.

No - the max temperature is  $212^{\circ}F$

2. Describe the range of the function.

$$72 \leq W(t) \leq 212$$

3. Does  $W(t) = 0$  have a solution? Explain how you know.

No - at no time is the temperature of the water  $0^{\circ}F$ .  
( $72^{\circ}F$  is the minimum temperature)

# Lesson 12: Piecewise Functions

## Cool Down: International Postage

$P$  is a function that gives the cost, in dollars, of mailing a letter from the United States to Mexico in 2018 based on the weight of the letter in ounces,  $w$ .

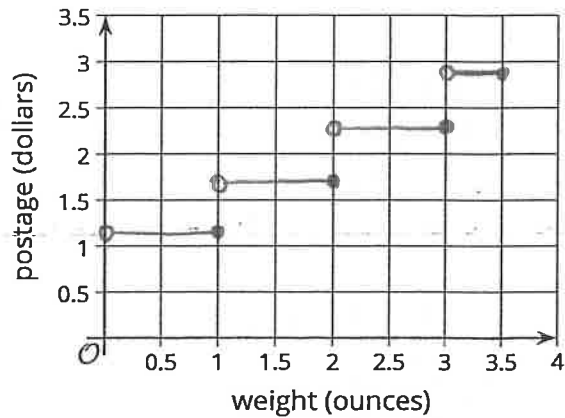
The function is defined by this set of rules:

$$P(w) = \begin{cases} 1.15, & 0 < w \leq 1 \\ 1.72, & 1 < w \leq 2 \\ 2.29, & 2 < w \leq 3 \\ 2.86, & 3 < w \leq 3.5 \end{cases}$$

- How much does it cost to send a letter that weighs 1.5 ounces? 2 ounces?

$P(1.5) = \$1.72$      $P(2) = \$1.72$

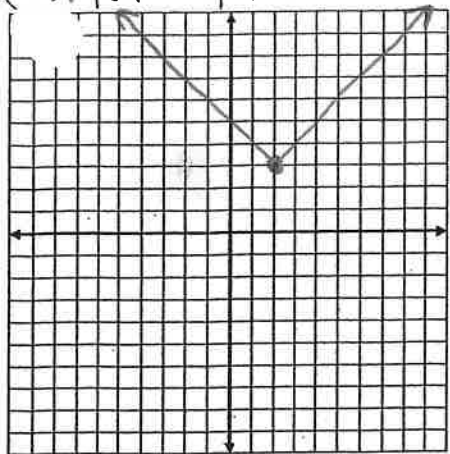
- Sketch a graph of the function on the coordinate plane.



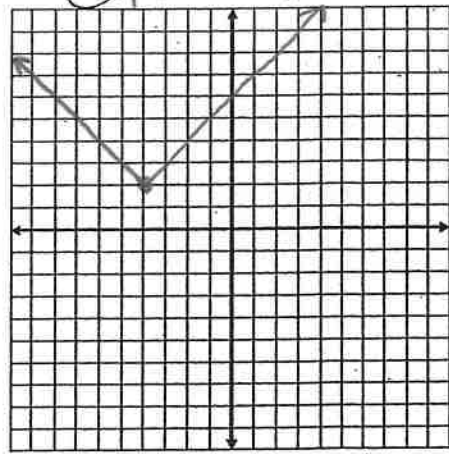
# Algebra 1: Lesson 4.14 Homework

Name: \_\_\_\_\_

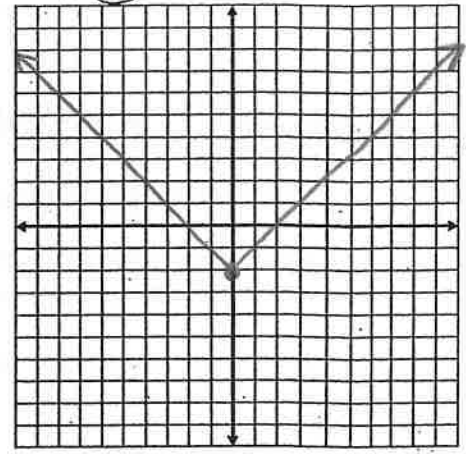
Graph  
①  $y = |x - 2| + 3$



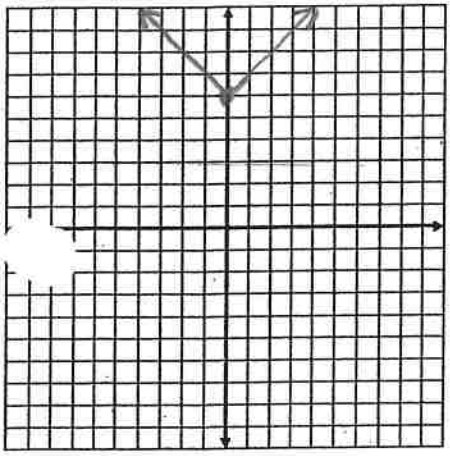
Graph  
②  $y = |x + 4| + 2$



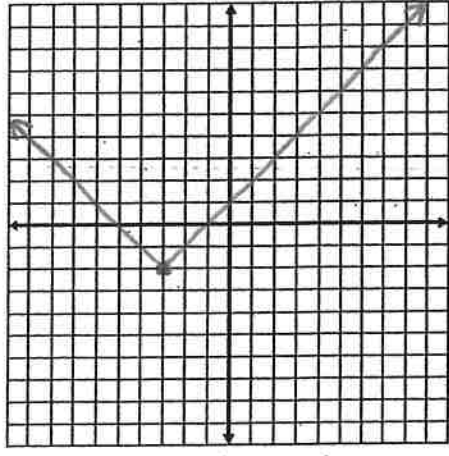
Graph Period:  
③  $y = |x| - 2$



Graph  
④  $y = |x| + 6$

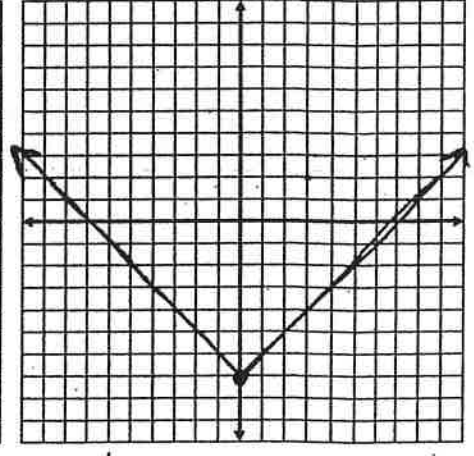


Graph  
⑤  $y = |x + 3| - 2$



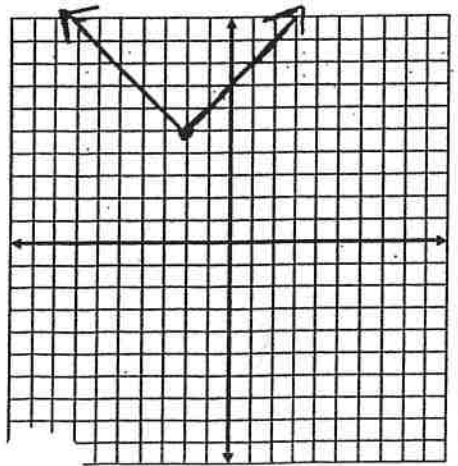
Write the equation of the graph

⑥  $y = |x| - 7$

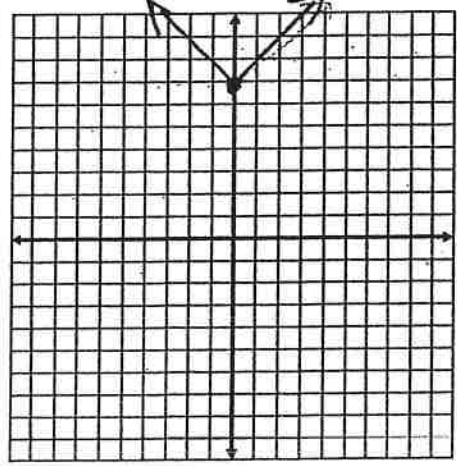


Write the equations of the graphs

⑦  $y = |x + 2| + 5$



⑧  $y = |x| + 7$



⑨  $y = |x + 6| - 4$

