

Name: KEY Week of: _____

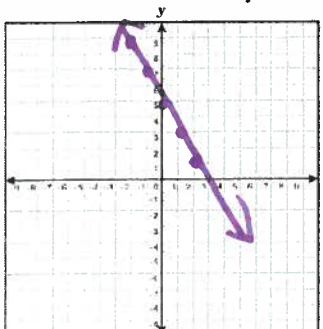
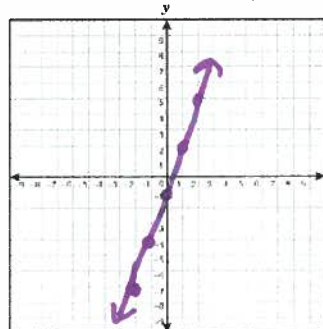
REVIEW

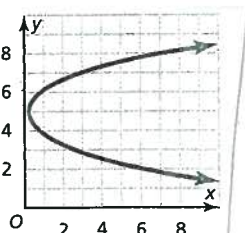
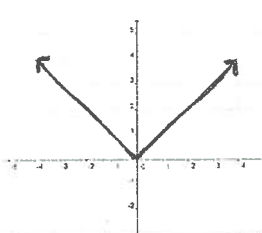
SHOW ALL WORK!!!!

<p>1. Simplify using a positive exponent.</p> 2^{-3} <p style="text-align: center; font-size: 2em;">$\frac{1}{2^3}$ or $\frac{1}{8}$</p>	<p>2. Circle the irrational number? Explain why it is irrational.</p> <p style="text-align: center;">4.5, $\frac{8}{11}$, $\sqrt{81}$, $6.\bar{1}$, $\sqrt{14}$</p> <p style="text-align: center; font-size: 1.5em;">It is not a perfect square.</p>
<p>3. Simplify $3x^2 - 6$, for $x = 2$</p> $3(2)^2 - 6$ $3(4) - 6 = 12 - 6 = 6$	<p>4. Solve the equation.</p> $5x + -3 = 5(x + 4)$ $5x + -3 = 5x + 20$ <p style="text-align: center; font-size: 1.5em;">NO SOLUTION</p>

Standard: Understand that a function assigns to each x-value (independent variable) exactly one y-value (dependent variable), and that the graph of a function is the set of ordered pairs (x,y). (3-1 in book)

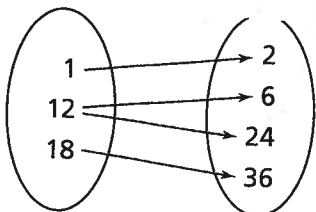
Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. Describe similarities and differences between linear and nonlinear functions from tables, graphs, verbal descriptions, and equations. (3-2 and 3-3 in book)

<p>5. Make a table and graph for the equation?</p> <p style="text-align: center;">$y = -2x + 5$</p> <div style="display: flex; justify-content: space-around;">  <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr><th>x</th><th></th><th>y</th></tr> </thead> <tbody> <tr><td>-2</td><td>$-2(-2)+5$</td><td>9</td></tr> <tr><td>-1</td><td>$-2(-1)+5$</td><td>7</td></tr> <tr><td>0</td><td>$-2(0)+5$</td><td>5</td></tr> <tr><td>1</td><td>$-2(1)+5$</td><td>3</td></tr> <tr><td>2</td><td>$-2(2)+5$</td><td>1</td></tr> </tbody> </table> </div>	x		y	-2	$-2(-2)+5$	9	-1	$-2(-1)+5$	7	0	$-2(0)+5$	5	1	$-2(1)+5$	3	2	$-2(2)+5$	1	<p>6. Make a table and graph for the equation.</p> <p style="text-align: center;">$y = 3x - 1$</p> <div style="display: flex; justify-content: space-around;">  <table border="1" style="border-collapse: collapse; text-align: center;"> <thead> <tr><th>x</th><th></th><th>y</th></tr> </thead> <tbody> <tr><td>-2</td><td>$3(-2)-1$</td><td>-7</td></tr> <tr><td>-1</td><td>$3(-1)-1$</td><td>-4</td></tr> <tr><td>0</td><td>$3(0)-1$</td><td>-1</td></tr> <tr><td>1</td><td>$3(1)-1$</td><td>2</td></tr> <tr><td>2</td><td>$3(2)-1$</td><td>5</td></tr> </tbody> </table> </div>	x		y	-2	$3(-2)-1$	-7	-1	$3(-1)-1$	-4	0	$3(0)-1$	-1	1	$3(1)-1$	2	2	$3(2)-1$	5
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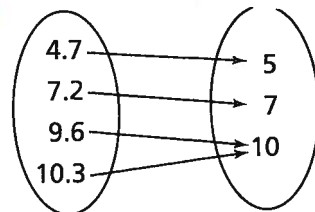
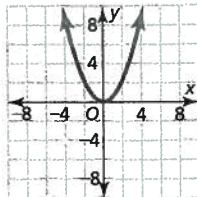
<p>7. Determine if each relation is a function.</p> <p>a) $(-2, 2), (-7, 1), (-3, 9), (3, 4), (-9, 5)$ Function</p> <p>b) $y = 4x - 1$ Function</p> <p>c) domain range</p> <div style="display: flex; align-items: center;"> <table border="1" style="border-collapse: collapse; text-align: center; margin-right: 20px;"> <tr><td>-8</td><td>→</td><td>7</td></tr> <tr><td>-1</td><td>→</td><td>9</td></tr> <tr><td>0</td><td>→</td><td>9</td></tr> <tr><td>15</td><td>→</td><td>9</td></tr> </table>  </div> <p style="text-align: center; font-size: 1.5em; color: purple;">NOT A FUNCTION NOT A FUNCTION</p>	-8	→	7	-1	→	9	0	→	9	15	→	9	<p>8. What is the domain and range of each function?</p> <p>a)</p> <table border="1" style="border-collapse: collapse; text-align: center; margin-bottom: 10px;"> <thead> <tr><th>x</th><th>y</th></tr> </thead> <tbody> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>1</td></tr> <tr><td>2</td><td>4</td></tr> <tr><td>3</td><td>9</td></tr> <tr><td>4</td><td>16</td></tr> </tbody> </table> <p style="margin-left: 20px;"><u>Domain</u> 0, 1, 2, 3, 4</p> <p style="margin-left: 20px;"><u>Range</u> 0, 1, 4, 9, 16</p> <p>b)</p>  <p style="margin-left: 20px;"><u>Domain</u> All Real Numbers</p> <p style="margin-left: 20px;"><u>Range</u> All numbers greater than or equal to 0.</p>	x	y	0	0	1	1	2	4	3	9	4	16
-8	→	7																							
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x	y																								
0	0																								
1	1																								
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3	9																								
4	16																								

9. Which of these relations are functions? Select all that apply.

x	y
3	3
4	5
5	7
5	9
6	11



x	y
5	31
6	28
7	25
8	22
9	19



10. Determine if each function is linear or nonlinear.

a) $y = 3x^2 + 1$

Nonlinear

b) $y = 4x$

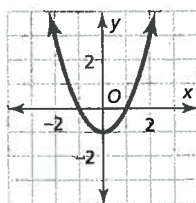
Linear

c)

x	y
-1	6
0	4
1	2
2	0

Linear

d)



Nonlinear

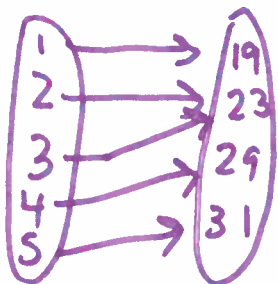
e)

x	y
0	1
1	2
2	5
3	10

Nonlinear

Application Problems:

11. The set of ordered pairs (1, 19), (2, 23), (3, 23), (4, 29), (5, 31) represent the number of tickets sold for a fundraiser. The input values represent the day and the output values represent the number of tickets sold on that day. Make an arrow diagram that represents the relation and determine if it is a function.



YES it is a function

13. Write an equation that is a linear function and one that is a non-linear function.

Linear

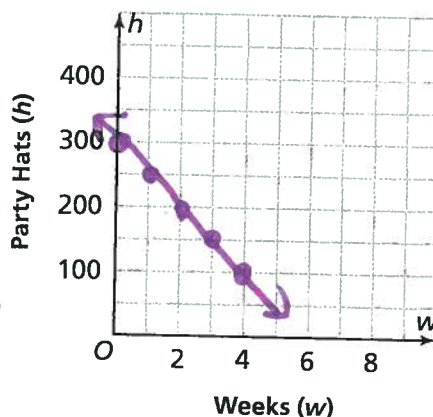
Nonlinear

$y = x + 4$

$y = x^2 - 2$

12. Each week, Darlene tracks the number of party hats her company has in stock. The table shows the weekly stock. Is the relation linear or nonlinear? Use a graph to support your answer.

Weeks	0	1	2	3	4
Party hats	300	250	200	150	100



How can Darlene use the graph to know when to order more party hats?

She knows she is going to sell about 50 per week.

Mental Math: Solve each problem mentally and explain your reasoning.

14.

75% of 200 = 150

same as $\frac{3}{4}$ of 200

20.

$893 + 207 = \underline{1100}$

$800 + 200 = 1000$ $93 + 7 = 100$

Extra Practice: Reflex, Pearson: 3-1, 3-2, 3-3 Math XL practice