

Name: _____ Due Date: _____ HW# _____
SGL 8th Grade Math Circle your Class: 801 802 803 804 805

February Break Homework

Packet Self-Evaluation: 1--2--3--4--5
(circle a score)

Packet Teacher Evaluation: 1--2--3--4--5

HW Rubric	1 point	2	3 points	4	5 points
• All problems complete?	Very few		Some		All complete
• All annotation and work shown?	Very few		Some		All shown
• Is math accurate?	Less than 50%		About 75%		90-100%



IXL.com Homework:

- Log in to IXL.com with your first initial and last name @m378 (like bfrye@m378)
- Password is "math" unless student changed the password
- Choose 5 skills from the Z set called "Functions" that you haven't completed yet
- Reach at least 92% on each of those Z skills
- If the Z skills are too difficult or too easy, try the Y skills instead
- If you get stuck: read the explanation after each mistake, or look on Youtube

IXL Self-Evaluation (circle a score): 1--2--3--4--5 Teacher Evaluation: 1--2--3--4--5

- ☐ Skill: _____ Score: _____
- ☐ Skill: _____ Score: _____
- ☐ Skill: _____ Score: _____
- ☐ Skill: _____ Score: _____
- ☐ Skill: _____ Score: _____

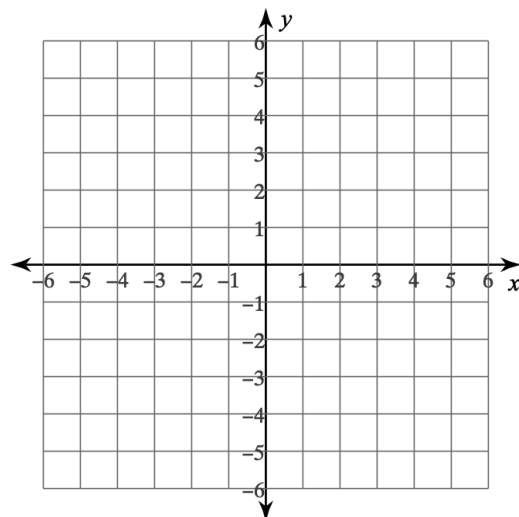
Parent Signature: _____

1. Use a table to graph an equation:

- ☐ Substitute each x-value into the equation to complete the table
- ☐ Graph the ordered pairs from the table
- ☐ Draw a line through the points with arrows on each end

$$y = -1x + 2$$

x	Show work	y
-2	$-1(-2) - 2 =$	
-1	$-1() - 2 =$	
0	$-1() - 2 =$	
1		
2		

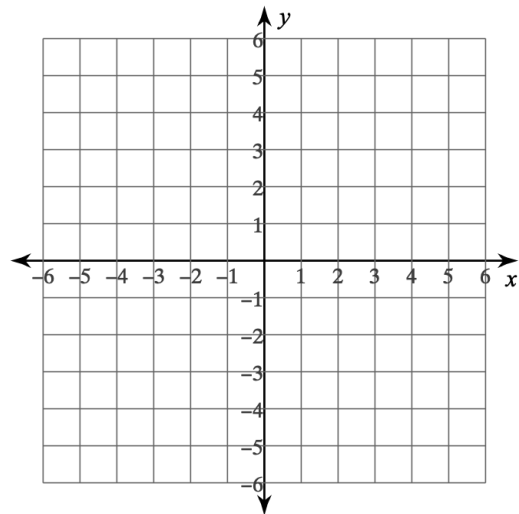


2. Use a table to graph an equation:

- ☐ Substitute each x-value into the equation to complete the table
- ☐ Graph the ordered pairs from the table
- ☐ Draw a line through the points with arrows on each end

$$y = 0.5x - 2$$

x	Show work	y
-2		
-1		
0		
1		
2		



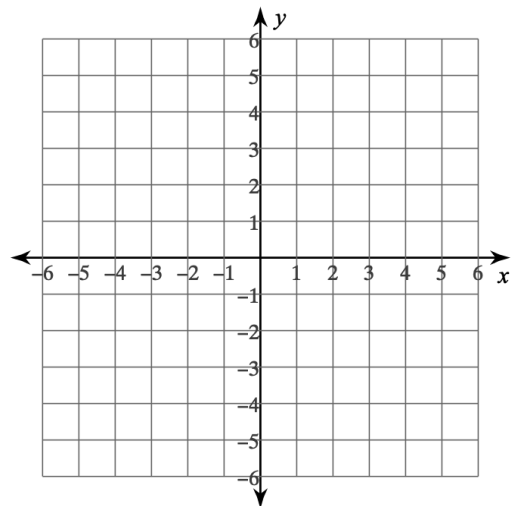
3. Use m and b to graph an equation:

- ☐ Circle the slope (m) and draw a box around the y-intercept (b)
- ☐ Make the slope (m) into a fraction. Draw arrows for slope (up, down, right, left)
- ☐ Plot the y-intercept (b) on the y-axis
- ☐ Use the slope to plot more points.
- ☐ Draw the line with arrows on each end

$$y = 3x - 5$$

b =

m =



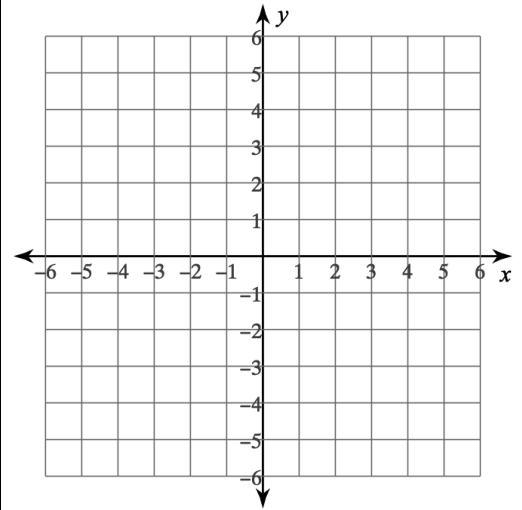
4. Use m and b to graph an equation:

- ☐ Circle the slope (m) and draw a box around the y -intercept (b)
- ☐ Make the slope (m) into a fraction. Draw arrows for slope (up, down, right, left)
- ☐ Plot the y -intercept (b) on the y -axis
- ☐ Use the slope to plot more points.
- ☐ Draw the line with arrows on each end

$$y = 0.5x + 3$$

$b =$

$m =$



5. Use m and b to make an equation from a graph:

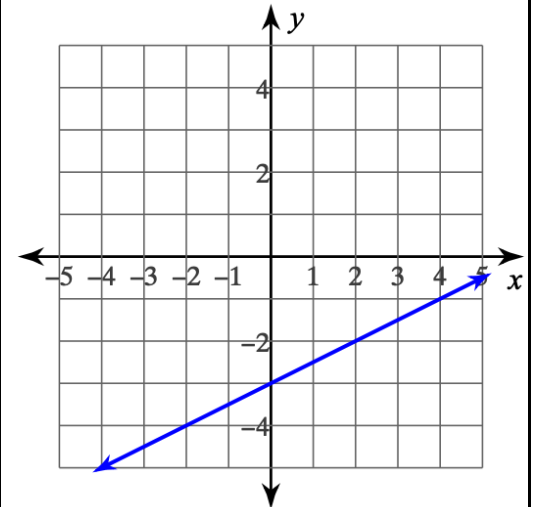
- ☐ Identify the y -intercept (b) on y axis and a second point on the line.
- ☐ Draw a slope triangle on the line to connect points.
- ☐ Identify the $\frac{\text{rise}}{\text{run}}$
- ☐ Write equation in the form of $y = mx + b$

$b =$

$m =$

Equatio

n:



6. Use m and b to make an equation from a graph:

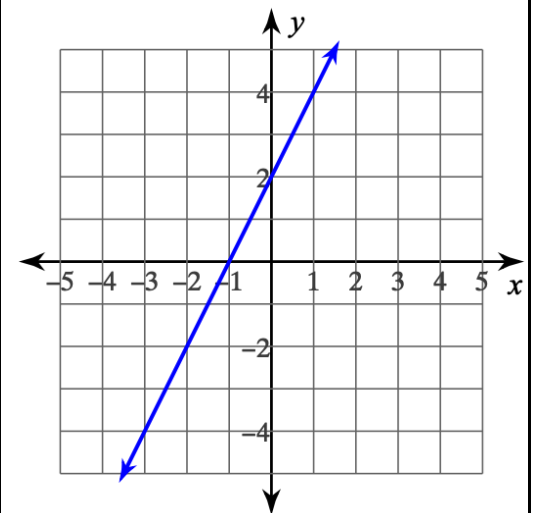
- ☐ Identify the y -intercept (b) on y axis and a second point on the line.
- ☐ Draw a slope triangle on the line to connect the points.
- ☐ Identify the $\frac{\text{rise}}{\text{run}}$
- ☐ Write equation in the form of $y = mx + b$

$b =$

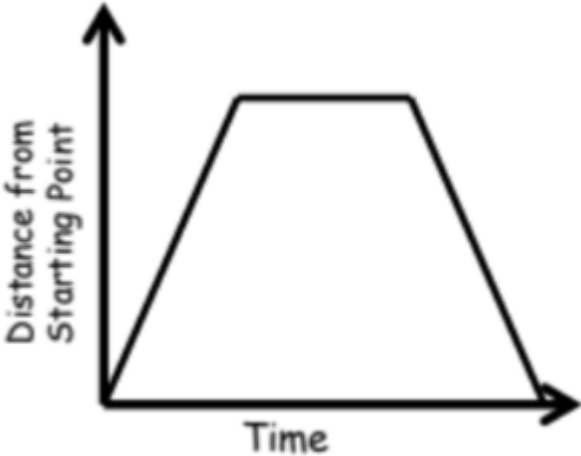
$m =$

Equatio

n:



Graph	Story
7. Draw a graph to represent this story.	<p>Baby Ruben is taking a bath. He figures out how to unplug the drain, and the water drains out until the tub is empty. He cries for a minute, so his mother plugs the drain again and turns the water back on. Once the bathtub is full again, Ruben is happy, so his mom turns off the water.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Label the x-axis with “time” and choose a label for the y-axis variable. <input type="checkbox"/> Draw the line. <input type="checkbox"/> Describe each part of the graph. Use at least 3 vocab (increasing, decreasing, stays constant, beginning, ending)

Graph	Story
<p>8.</p> 	<p>Write a story to represent the graph:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

9. Draw arrows to show how the decimal moved. Fill in the missing blanks.

Scientific Notation	Standard Form		Scientific Notation	Standard Form
$36.9 \cdot 10^0$	$= 36.9$		$8.42 \cdot 10^0$	$=$
$36.9 \cdot 10^1$	$= 369.$		$8.42 \cdot 10^{-1}$	$=$
$36.9 \cdot 10^2$	$= 3,690.$		$8.42 \cdot 10^{-2}$	$= .0842$
$36.9 \cdot 10^3$	$=$		$8.42 \cdot 10^{-3}$	$=$
$36.9 \cdot 10^4$	$=$		$8.42 \cdot 10^{-4}$	$=$
$36.9 \cdot 10^5$	$=$		$8.42 \cdot 10^{-5}$	$=$

What happens when there is an exponent of 0?

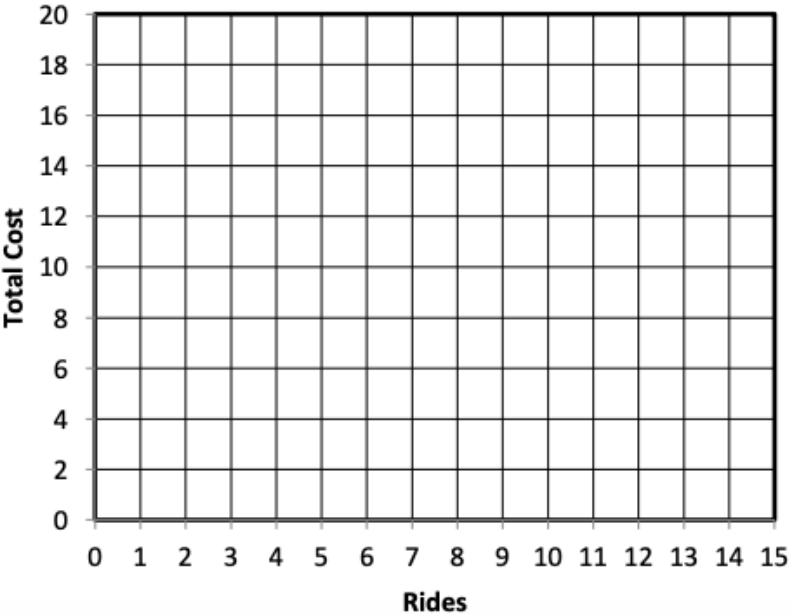
What happens when there is a negative exponent?

10. Annotate the like terms with colors or shapes. Fill in the missing blanks.

1	$5x + 12 - 3x$	$= 5x - 3x + 12$	$= 2x + 12$
2	$12a + 5b + 8b + 5a$	$= 12a + 5a + 5b + 8b$	$=$
3	$13c + 7d - 3c - 3d$	$=$	$=$
4	$5e + 8 + 3f + 2e + 8f - 2$	$=$	$=$
5	$6g + 9 + h - 2 - 3g + h + 0g$	$=$	$=$
6	$8i + 10j - 3 - 3i - 6j - i - 3 - i$	$=$	$=$
7	$342k - 46m + 56m - 132k$	$=$	$=$
8	$-1n + p - n - n - p + p$	$=$	$=$

What happens when a variable has 0 as a coefficient?

What happens when a variable doesn't show any coefficient?

<p><u>RIDES AT THE FAIR:</u></p> <p>To get into the fair, you must pay \$_____.</p> <p>Each ride costs \$_____.</p>	<p><u>Initial Value (or Starting Point):</u></p>																
<p>Slope (m) = _____ Y-Intercept (b) = _____</p> <p>Equation (y=mx+b): _____</p>	<p><u>Rate of Change:</u> increasing/decreasing _____ for each _____</p>																
<p>Graph:</p> <p style="text-align: center;">Fair Cost</p> 	<p>Table:</p> <table border="1" data-bbox="1068 1207 1383 1747"> <thead> <tr> <th># of rides</th> <th>Total Cost</th> </tr> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> </tr> <tr> <td>3</td> <td></td> </tr> <tr> <td>6</td> <td>\$22</td> </tr> <tr> <td>9</td> <td>\$31</td> </tr> <tr> <td>12</td> <td></td> </tr> <tr> <td>15</td> <td>\$49</td> </tr> </tbody> </table> <p>If it costs ____ for 3 rides, then it must cost ____ for 1 ride.</p>	# of rides	Total Cost	x	y	0		3		6	\$22	9	\$31	12		15	\$49
# of rides	Total Cost																
x	y																
0																	
3																	
6	\$22																
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