

Quarter 3 Skills Quiz Practice

1. Add/Subtract/Multiply/Divide

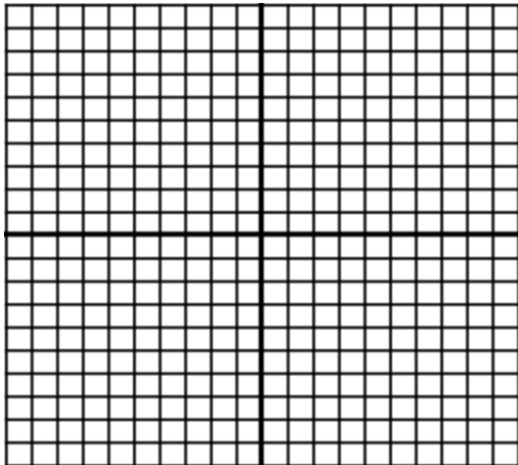
a. $\frac{2}{3} + \frac{5}{2}$	b. $\frac{2}{3} - \frac{5}{2}$	c. $\frac{2}{3} \cdot \frac{5}{2}$	d. $\frac{2}{3} \div \frac{5}{2}$
e. $\frac{1}{4} + \frac{11}{12}$	f. $\frac{1}{4} - \frac{11}{12}$	g. $\frac{1}{4} \cdot \frac{11}{12}$	h. $\frac{1}{4} \div \frac{11}{12}$
i. $\frac{1}{2} + \frac{3}{4}$	j. $\frac{2}{3} - \frac{4}{5}$	k. $\frac{2}{5} + \frac{1}{2} - \frac{4}{3}$	

2. Writing Linear Equations in a form of your choice

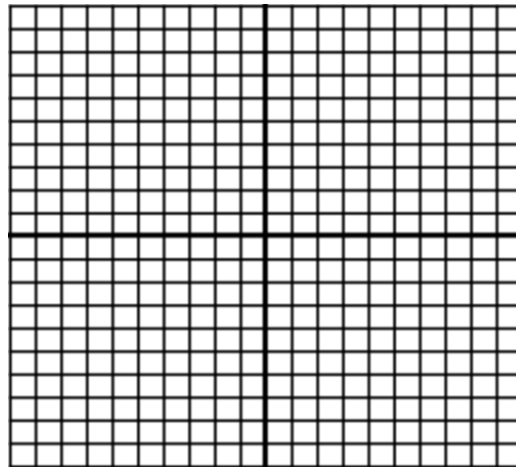
Slope-Intercept Form	Point-Slope Form	Standard Form	Graphing Form																																										
$y = mx + b$	$y - y_1 = m(x - x_1)$	$Ax + By = C$	$y = a(x - h) + k$																																										
a. Write an equation for a line with a slope of $-\frac{2}{5}$ containing the point $(1, -3)$.	b. Write an equation for a line containing the points $(2, 6)$ and $(-3, 8)$.	c. Write an equation for a vertical line containing the point $(-4, -2)$.																																											
d. Write an equation for a line with a slope of 3 containing the origin.	e. Write an equation for a horizontal line containing the point $(8, 7)$.	f. Write an equation for a line represented in the table below. <table><tr><td>x</td><td>-1</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>y</td><td>7</td><td>4</td><td>1</td><td>-2</td><td>-5</td><td>-8</td></tr></table>		x	-1	0	1	2	3	4	y	7	4	1	-2	-5	-8																												
x	-1	0	1	2	3	4																																							
y	7	4	1	-2	-5	-8																																							
g. <table><tr><td>x</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>y</td><td>5</td><td>12</td><td>19</td><td>26</td><td>33</td><td>40</td></tr></table>	x	0	1	2	3	4	5	y	5	12	19	26	33	40	h. <table><tr><td>x</td><td>-6</td><td>-4</td><td>-2</td><td>0</td><td>2</td><td>4</td></tr><tr><td>y</td><td>24</td><td>19</td><td>14</td><td>9</td><td>4</td><td>-1</td></tr></table>	x	-6	-4	-2	0	2	4	y	24	19	14	9	4	-1	i. <table><tr><td>x</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>y</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td></tr></table>		x	2	3	4	5	6	7	y	8	9	10	11	12	13
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y	8	9	10	11	12	13																																							

3. Graphing Lines

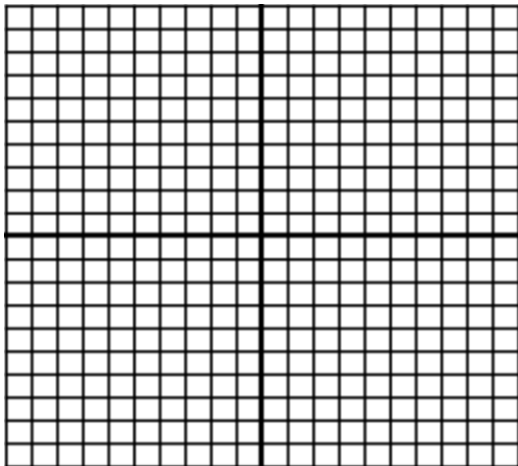
a. Graph the line $y = \frac{3}{4}x - 5$.



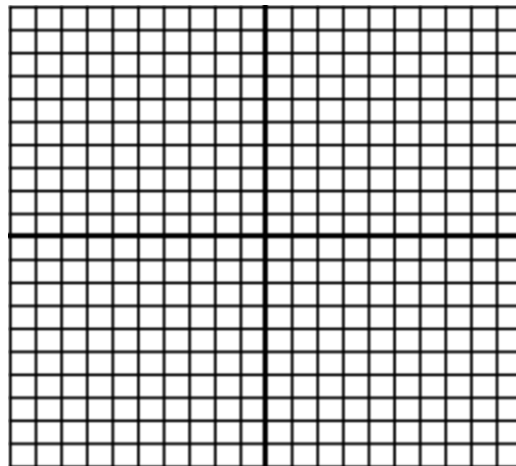
b. Graph the line $2x + 3y = 15$.



c. Graph the line $y = \frac{3}{2}(x - 5) + 1$



d. Graph the line $y - 4 = \frac{-2}{5}(x - 10)$



4. Write an exponential function representing the information in each table.

a.

x	0	1	2	3	4	5
y	-4	-8	-16	-32	-64	-128

b.

x	1	2	3	4	5	6
y	5	15	45	135	405	1215

c.

x	-2	-1	0	1	2	3
y	10	5	$\frac{5}{2}$	$\frac{5}{4}$	$\frac{5}{8}$	$\frac{5}{16}$

5. Factor a Trinomial with Leading Coefficient $\neq 1$

a. Factor $3x^2 - 10x - 8$.

b. Factor $2x^2 - 13x + 20$

c. Factor $3x^2 + 7x + 4$

d. Factor $4x^2 - 11x - 3$

e. Factor $5x^2 + 16x + 12$

f. Factor $9x^2 - 9x - 28$.

6. Solving Literal Equations

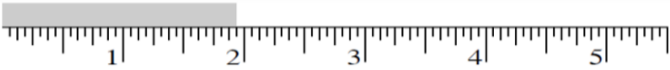
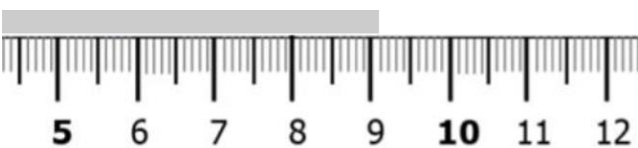
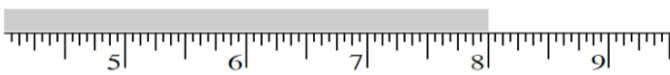
Question: Why is it beneficial to practice solving literal equations?

A **literal equation** is an **equation (or formula)** where symbols represent values.

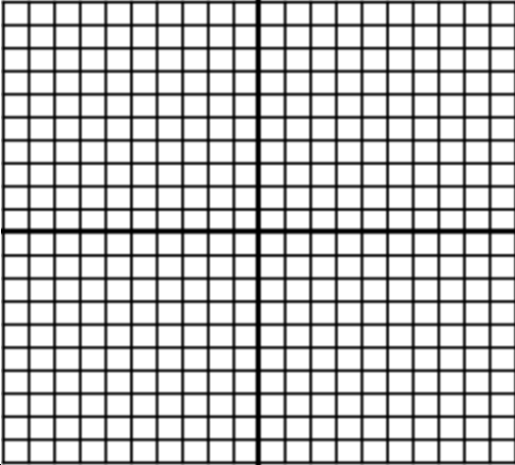
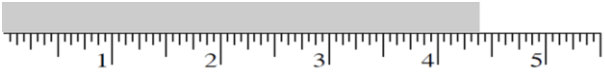
* Solve each formula for the indicated variable.

a. $A = \frac{1}{2}bh$ for h	b. $s = \frac{1}{2}gt^2$ for g	c. $V = lwh$ for w	
d. $C = 2\pi r$ for r	e. $Ax + By = C$ for y	f. $C = \frac{5}{9}(F - 32)$ for F	
g. Solve $y = mx + b$ for b .	h. Solve $y = mx + b$ for m .	i. Solve $Ax + By = C$ for y .	
j. Solve $Fm + Fb = a$ for F .	k. Solve $\pi r^2 + 2\pi rh = A$ for π .	l. Solve $pb - yps = br$ for p .	m. Solve $sr + tr = u$ for r .
o. Solve for x . $ax + bx = c$		p. Solve for x . $\frac{x}{a} - 5 = b$	
q. Solve for x . $\frac{x-2}{2} = m + n$		r. Solve for x . $\frac{2}{5}(x + 1) = g$	

6. Measure each length (you should be within 1/16 inch or 1mm) for full credit. Be sure to include units with your answer. Consider the each image as a snapshot of the ruler. The object in question begins its length at 0 on the ruler.

a. 	b. 
c. 	d. 

Practice Basic Skills Quiz – This will be the format of your skills quizzes this quarter.

1. Write an exponential equation representing the information in each table. <table border="1" data-bbox="110 825 565 919"> <tbody> <tr> <td>x</td> <td>-1</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>y</td> <td>$\frac{2}{25}$</td> <td>$\frac{2}{5}$</td> <td>2</td> <td>10</td> <td>50</td> <td>250</td> </tr> </tbody> </table>	x	-1	0	1	2	3	4	y	$\frac{2}{25}$	$\frac{2}{5}$	2	10	50	250	2. Evaluate $\frac{3}{8} \cdot \frac{-5}{9}$
x	-1	0	1	2	3	4									
y	$\frac{2}{25}$	$\frac{2}{5}$	2	10	50	250									
3. Graph the line $y = \frac{-2}{3}x + 4$. 	4. Measure each length (you should be within 1/16 inch or 1mm) for full credit. Be sure to include units with your answer. 														
5. Solve $t = lw + s^2$ for w.	6. Evaluate $\frac{1}{3} + \frac{2}{5}$.														
7. Write an equation for a line represented in the table below. <table border="1" data-bbox="110 1875 459 1927"> <tbody> <tr> <td>x</td> <td>0</td> <td>5</td> <td>10</td> <td>15</td> <td>20</td> <td>25</td> </tr> <tr> <td>y</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>14</td> </tr> </tbody> </table>	x	0	5	10	15	20	25	y	4	6	8	10	12	14	8. Factor $4x^2 - 3x - 10$.
x	0	5	10	15	20	25									
y	4	6	8	10	12	14									