

Warm up

Copy the expression notes onto page 8

expression - a set of numbers, variables, and products of numbers and variables separated by addition and subtraction

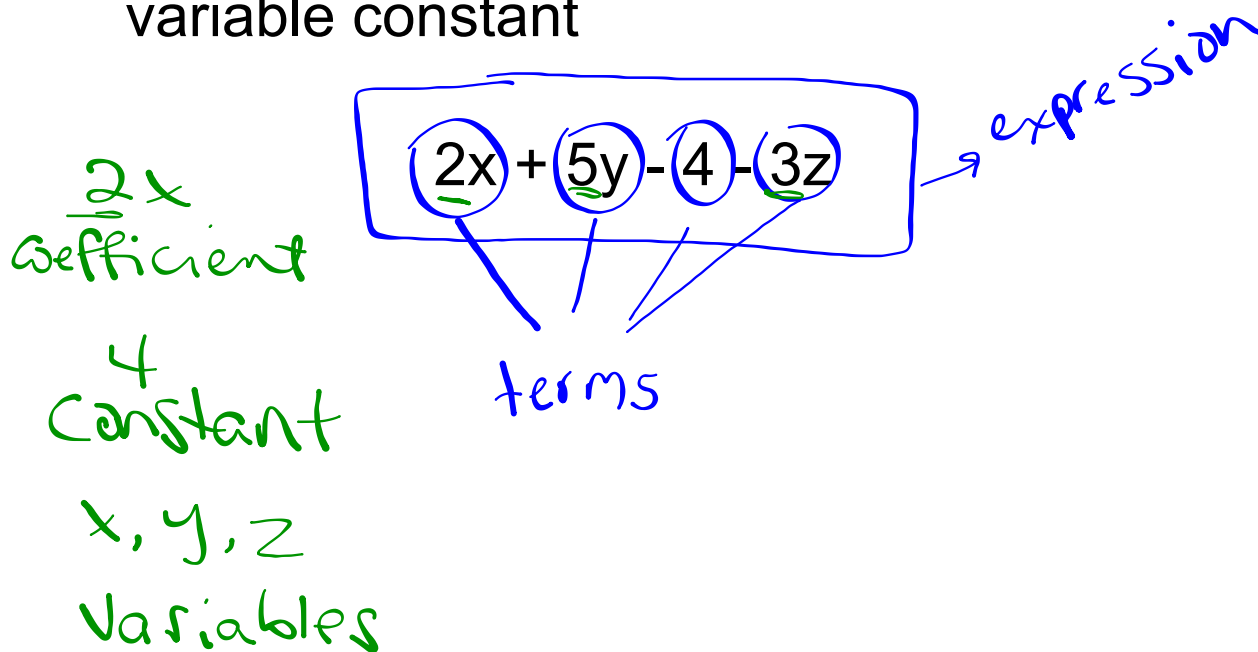
term - section of an expression between add or subtract

variable - a letter that stands in place of a number

coefficient - the number in front of a variable telling you to multiply; if there is no number then the coefficient is 1

constant - the number that is alone in a term

identify expression, term, coefficient,  
variable constant



Go to Google Classroom and open the Google Doc. Follow all directions and watch the one step equations videos.

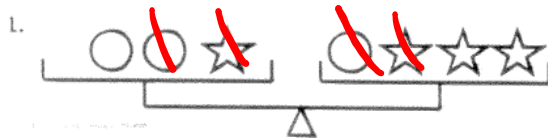
Name:		Date:	
Topic:		Class:	
Main Ideas/Questions	Notes/Examples		
	Steps to Solve:		
	①	Locate the variable.	
	②	Determine the operation tied to the variable.	
	③	Use <b>inverse operations</b> on both sides of the equal sign to solve.	
④	Check your solution!		
INVERSE OPERATIONS	Inverse operations can be used to solve equations:		
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Addition</div> <span style="font-size: 2em; margin: 0 10px;">↔</span> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Subtraction</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Multiplication</div> <span style="font-size: 2em; margin: 0 10px;">↔</span> <div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;">Division</div> </div>		
SET I: Addition & Subtraction	Directions: Solve each equation. Check all solutions.		
	1. $x + 7 = -1$	$(-8) + 7 = -1$ ✓	2. $m - 11 = -9$
	$x + 7 = -1$ $-7 \quad -7$ <hr/> $x = -8$		$m - 11 = -9$ $+11 \quad +11$ <hr/> $m = 2$
	$x = -8$		$m = 2$
	3. $9 = 14 + h$	$14 + (-5) = 9$ ✓	4. $-15 + w = 14$
	$9 = 14 + h$ $-14 \quad -14$ <hr/> $h = -5$		$-15 + w = 14$ $+15 \quad +15$ <hr/> $w = 29$
$h = -5$		$w = 29$	
5. $-21 = k - 8$		6. $-1 = -4 + v$	
$k - 8 = -21$ $+8 \quad +8$ <hr/> $k = -13$		$v - 4 = -1$ $+4 \quad +4$ <hr/> $v = 3$	
$k = -13$		$v = 3$	
SET 2: Multiplication & Division	Directions: Solve each equation. Check all solutions.		
	7. $4a = -24$		8. $-56 = -7p$
$4a = -24$ $\div 4 \quad \div 4$ <hr/> $a = -6$		$-56 = -7p$ $\div -7 \quad \div -7$ <hr/> $8 = p$	
$a = -6$		$8 = p$	

<p><math>-k</math> <math>-1k = 7</math></p>	<p><del>(9)</del> <math>\frac{n}{5} = 9</math> (5) <math>n = 45</math></p>	<p><del>(10)</del> <math>2 = \frac{r}{8}</math> (8) <math>-16 = r</math></p>
	<p>11. <math>-k = 7</math> <math>-1 = -1</math> <math>(k = -7)</math></p>	<p>12. <math>\frac{x}{-6} = -12</math></p>
<p><b>SET 3:</b> Mixed Practice</p>	<p><b>Directions:</b> Solve each equation. Check all solutions.</p>	
	<p>13. <math>x - 11 = -3</math></p>	<p>14. <math>-10d = 40</math></p>
	<p>15. <math>a + 15 = 2</math></p>	<p>16. <math>24 = -3 + h</math></p>
	<p>17. <math>-4 = \frac{m}{-3}</math></p>	<p>18. <math>9 = -y</math></p>
	<p>19. <math>-47 + w = -10</math></p>	<p>20. <math>\frac{p}{9} = -9</math></p>
	<p>21. <math>-48 = -16a</math></p>	<p>22. <math>k - 9 = -38</math></p>
	<p>23. <math>-20 = \frac{v}{-4}</math></p>	<p>24. <math>6n = 0</math></p>

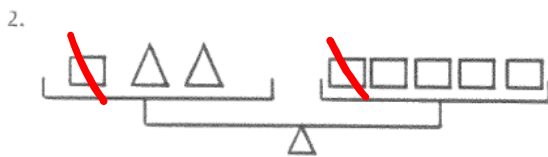
Pan Balance and Model Equations

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ Bell: \_\_\_\_\_

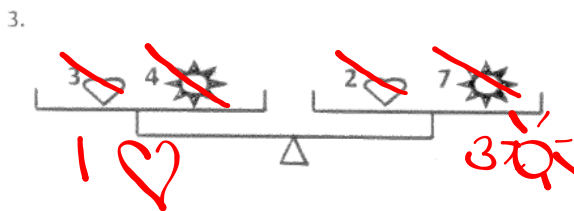
Solve these pan balance problems. In each diagram, the two pans are balanced.



One circle weighs as much as 2 star(s)

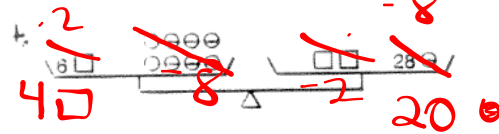


One triangle weighs as much as 2 square(s)

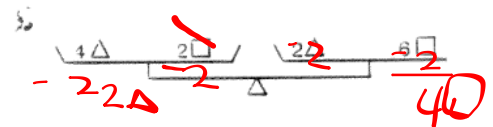


One heart weighs as much as 3 sun(s)

Solve the pan-balance problems.

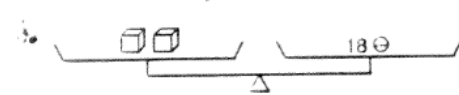


One square weighs as much as 5 marbles.

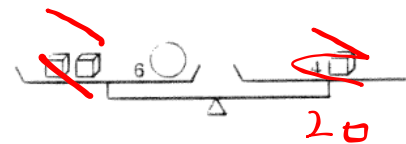


One triangle weighs as much as 2 squares.

Advanced Only

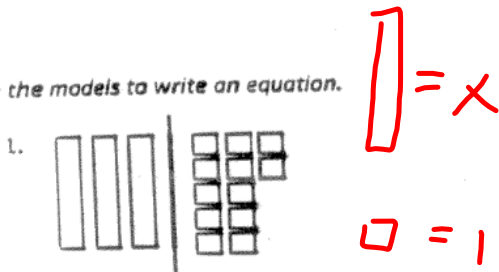


One block weighs as much as 9 marbles.



One ball weighs as much as 3 marbles.

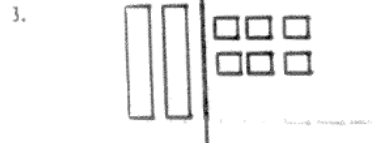
Use the models to write an equation.

1. 

$$3x = 12$$


---

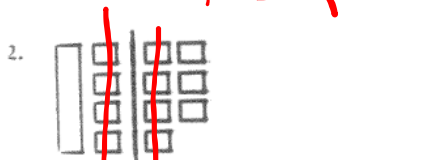

$$x = 4$$

3. 

$$2x = 6$$


---



$$x = 3$$

2. 

$$x + 4 = 7$$


---


$$\begin{array}{r} -4 \quad -4 \\ \hline x = 3 \end{array}$$

4. 

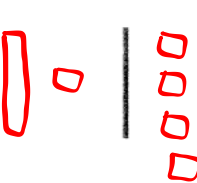
$$x + 3 = 6$$


---



$$\begin{array}{r} -3 \quad -3 \\ \hline x = 3 \end{array}$$

Draw a model for the equation.

5.  $x + 1 = 4$



6.  $3y = 6$



7.  $x + 2 = 5$

