

Warm Up:



Shirley is going to have the exterior of her home painted. Tim's Painting charges a base fee of \$250 plus \$14 per hour. Colorful Paints charges \$22 per hour. After how many hours would the two costs be equal?

same

$$\text{Tim's: } 250 + 14x$$

$$\text{CP: } 22x$$

$$\begin{array}{r}
 250 + 14x = 22x \\
 -14x \quad -14x \\
 \hline
 250 = 8x \\
 \underline{\quad 8} \quad \underline{\quad 8} \\
 31.25 = x
 \end{array}$$

Solving Equations w/ Variables on Both Sides

#s		letters
12 - 2u		9u + 45
+2u		+2u
12		11u + 45
-45		-45
-33		11u
11		11
-3		= u
<u>11</u> <u>-3 = u</u>		

letters		#s
11 - 1m		51 - 6m
+6m		+6m
11		51
+5m		51
-11		-11
5m		40
5		5
<u>5m</u> <u>5</u> <u>m = 8</u>		

Do you understand?

You are solving an equation with a variable on each side. Does the side on which you choose to isolate the variable impact the solution? Why might you choose one side over the other?



Side doesn't matter

$$7k = 3k - 36$$

practice
practice
practice
practice

$$3(6p - 1) = 11p - 45$$



$$5(x - 2) = 2(10 + x)$$

Exit Ticket

Name: _____

Variables
on Both Sides Sprint

Score

____/9

Directions: INDEPENDENTLY solve each equation in the space below. Write your answer on the line provided.

1. $3a + 7 = -4a - 35$

2. $-4x = 2x + 42$

3. $-4(3 - x) = 36$
