

SSR

Read at a Level 0 until 9:15

Dec 3-9:47 PM

Opener

1. Does the equation: $y = 3x - 8$ represent a proportional relationship? Why or why not?

- goes through origin
- Straight line
- a fee not proportional

Not proportional
b/c of the
-8

2. If you deposit \$4000 into an account that earns 4.5% simple interest annually, how much interest will you earn in 2 years?

$$I = \text{pr} \cdot t$$

interest = principal × rate × time

$$4000 \times 0.045 \times 2 = 360$$

3. Simplify:

$$2(x + 2) - (3x + 1)$$

$$2 \overbrace{\boxed{2x + 4}}^{x+2} - (3x + 1)$$

$$\boxed{(2x + 4)} + \boxed{(3x + 1)}$$

$$\boxed{-x + 3}$$

Jun 17-10:13 AM

Learning Target

I can set up and solve two-step equations.

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Two-Step Equations

Solving a two-step equation is just like solving a one-step equation, with more _____! The goal is the same: _____. To solve a two-step equation, we first undo _____ or _____ and then undo _____ or _____. Remember, what you do to one side you do to the _____!!

Practice Examples:

1. $2x + 6 = 8$

P	U
x	÷
+	-

↑

$$\begin{array}{r}
 2x + 6 = 8 \\
 -6 \quad -6 \\
 \hline
 2x = 2 \\
 \div 2 \quad \div 2 \\
 \hline
 x = 1
 \end{array}$$

2. $-4x - 9 = -3$

P	U
x	÷
-9	+9

↑

$$\begin{array}{r}
 -4x - 9 = -3 \\
 +9 \quad +9 \\
 \hline
 -4x = 6 \\
 \div -4 \quad \div -4 \\
 \hline
 x = 1.5
 \end{array}$$

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3. $-\frac{2}{3}x + 6 = -1$

D	U
$x \cdot \frac{-2}{3}$	$\div \frac{-2}{3}$
$+6$	-6

$-\frac{2}{3}x + 6 = -1$
 $\quad \quad -6 \quad -6$

~~$\frac{-2}{3}x = -7$~~
 $\frac{-2}{3}x = -7 \cdot \frac{-3}{-2} = \frac{21}{2}$

$x = 10.5$

4. $4 + \frac{1}{5}x = -1$

D	U
$x \cdot \frac{1}{5}$	$\div \frac{1}{5}$
$+4$	-4

$4 + \frac{1}{5}x = -1$
 $\quad \quad -4 \quad -4$

$\frac{1}{5}x = -5$
 $x = \frac{-5}{1} \cdot \frac{5}{1} = \frac{-25}{1}$

$x = -25$

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5. $2r - 3.1 = 1.7$

D	U
$x \cdot 2$	$\div 2$
-3.1	$+3.1$

$2r - 3.1 = 1.7$
 $\quad \quad +3.1 \quad +3.1$

~~$2r = 4.8$~~
 $\frac{2r}{2} = \frac{4.8}{2}$

$r = 2.4$

6. $4x + \frac{1}{3} = \frac{3}{4} - \frac{1}{3}$

D	U
$x \cdot 4$	$\div 4$
$+ \frac{1}{3}$	$- \frac{1}{3}$

$4x + \frac{1}{3} = \frac{3}{4} - \frac{1}{3}$
 $\quad \quad -\frac{1}{3} \quad -\frac{1}{3}$

$4x = \frac{9}{12} - \frac{4}{12}$
 $\frac{4x}{4} = \frac{5}{12}$
 $x = \frac{5}{12} \cdot \frac{1}{4}$

$x = \frac{5}{48}$

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7. Tonya had her birthday party at the movies. It cost \$27 for pizza and \$8.50 per friend for the movie tickets. How many friends did Tonya have at her party if she spent \$78?

$x = \text{friends}$

$$8.50x + 27 = 78$$

$$-27 \quad -27$$

D	U
$\times 8.50 \div 8.50$	
$+27$	-27

$$\frac{8.50x}{8.50} = \frac{51}{8.50}$$

$$x = 6$$



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Practice

Two-Step Equations: PRACTICE

Solve the equation. Check your solution.

1. $3k - 2 = 10$

2. $5p + 2 = -10$

3. $-4x + 3 = -11$

4. $12 = 2d + 3.2$

5. $-1 - 5h = 14$

6. $1.25r - 7 = 2.5$

Time

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Check your work!

4 -3/6 4 -1.5 -3

 -2.4 3.5

17.35 7 12

 4.4 -1.05 -1

7.6 -4

Jan 11-5:32 PM

SUMMARY

TABLE DISCUSSION: How does the order in which you solve a two-step equation compare to the order of operations?

Jun 17-10:14 AM

Attachments

Two-Step Equations Practice.docx