lesson seven - student resource sheet

Lesson Objective: Solve one-step equations.

Vocabulary Box

equation – A mathematical statement that says that two expressions have the same value; any number sentence with an equal sign. Example: $3+2=5$.

inverse – Opposite. Examples: –5 is the additive inverse of 5 because their sum is zero. $\frac{1}{3}$ is the multiplicative inverse of 3 because their product is 1.

inverse operations – Two operations that have the opposite effect. Example: addition and subtraction.

solution – The value of a variable that makes an equation true. Example: $x = 3$ is a solution of $x+2=5$.

Guided Practice

Complete the following practice problems with your partner. Then your teacher will review the answers. Make sure that you show all important work.

Directions: Solve each equation. Show your work. Check your answers.

1. $a-2\frac{1}{10}=4\frac{3}{4}$

2. $-12c = -84$

3. $\frac{d}{7}=-6$

4. $f - (-8) = 5$

5. $-9 = h + (-7)$

6. $-\frac{9}{16}j = \frac{3}{8}$

Summary/Closure

A. Vocabulary Words

Directions: Fill in each blank with the correct word to make a sensible statement about each vocabulary word you learned today.

WORD BANK

equation	operations	zero	value	product	additive inverse
inverse	expressions	1	subtraction	multiplication	opposite
sum	inverse operations		multiplicative inverse		

1. An _____ is an _____. The _____ _____ of 13 is –13 because their _____ is _____. The _____ _____ of $-\frac{1}{8}$ is –8 because their _____ is _____.

2. An _____ is a mathematical statement that says that two _____ have the same _____.

3. Two _____ that have the opposite effect are called _____ _____. One pair of these is addition and _____, and another example is _____ and division.

4. When you find the _____ of a _____ that makes an _____ true, you have found the _____'s _____.

B. Summarize What We Learned Today

Directions: Write four sample problems like the ones that we studied today. Be sure to include fractions, various operations, and multiple signs. Then write a few sentences explaining how to solve all types of one-step equations. You will use this explanation as a reference.

lesson eight - student resource sheet

Lesson Objective: Solve one-step equations.

Vocabulary Box

equation – A mathematical statement that says that two expressions have the same value; any number sentence with an equal sign. Example: $3+2=5$.

inverse – Opposite. Examples: –5 is the additive inverse of 5 because their sum is zero. $\frac{1}{3}$ is the multiplicative inverse of 3 because their product is 1.

inverse operations – Two operations that have the opposite effect. Example: addition and subtraction.

solution – The value of a variable that makes an equation true. Example: $x = 3$ is a solution of $x+2=5$.

Independent Practice

Directions: Solve each equation. Show your work. Check your answers.

1. $w+4\frac{8}{9}=12\frac{2}{9}$

2. $-5=r-3\frac{3}{5}$

3. $\frac{15}{8}y=-\frac{9}{28}$

4. $-12 = \frac{u}{-4}$

5. $6 = p - (-13)$

6. $a + (-5.8) = -1.1$

7. $\frac{d}{-12} = 4\frac{1}{6}$

Directions: Solve each equation. Show your work. Check your answers.

1. $1\frac{2}{3}f = 4\frac{5}{6} - 7\frac{8}{9}$

2. $\frac{7}{8}h = 0.2$

For each of the following problems write an equation to model the situation. Next, solve the equation. Then, answer the problem, and check your answer to be sure that it makes sense.

1. Levi is $2\frac{3}{4}$ inches taller than Sarah. If Levi is $70\frac{1}{8}$ inches tall, how tall is Sarah?

2. After he wrote a check for $56.27 to pay his electric bill, Gaston saw in his check register that he had already paid it. He therefore corrected his account balance by subtracting a negative $56.27 from it. His new balance is $401.88. What was his balance before subtracting the negative $56.27?

3. Seven-eighths of the students in Anastasia's school returned their permission slips and were allowed to go on a field trip. If 672 students returned their slips, how many students are in Anastasia's school?

4. When Guillermo bought stock in OAL, the price per share was $72\frac{1}{2}$. When he sold his stock, the price per share was 108. How much did the price per share increase over this time period?

5. Elena recorded that the temperature at 6:00 am was –24°F. She noticed that this temperature was $2\frac{2}{3}$ times the temperature she recorded at 6:00 pm the prior evening. What was the temperature at 6:00 pm?

Directions: Solve each equation. Show your work. Check your answers.

1. $m - \frac{1}{3} = \frac{2}{9}$

2. $-\frac{5}{8} = \frac{n}{2}$

3. v – (–32) = 18

lesson nine - student resource sheet

Lesson Objective: Solve multi-step equations. Check solutions by substituting values into original equations.

Vocabulary Box

constant – A value that does not change. Examples: 4, $-6\frac{2}{3}$, and π.

combining like terms – Adding or subtracting two or more terms that contain exactly the same variable, or adding or subtracting two or more constant terms. Examples: $5x + 3x = 8x$, and $(2w - 7) + (w - 4) = 3w - 11$, but $4m + 5n$ cannot be simplified because the two terms are not like terms.

Guided Practice

Complete the following practice problems with your partner. Then your teacher will review the answers. Make sure that you show all important work.

Directions: Solve each equation. Show your work. Check your answers.

1. $8j + 44 = 108$

2. $-5k + 9 - k = 42 - 63$

3. $\frac{7}{5} = -\frac{28}{5} + \frac{1}{9}z$

4. $9 - x + 5x = \frac{1}{3} + \frac{1}{4}$

Summary/Closure

A. Vocabulary Words

Directions: In the following list of numbers, circle the terms that are constants.

$-5 \quad 2x \quad \frac{2}{3} \quad 1 \quad -3y \quad 0 \quad \pi \quad x^2 \quad 7.75 \quad 7.7n$

Directions: Draw lines connecting groups of like terms. Then combine like terms.

$6a + 3b + 5c + 10 - 7b + c - 4 - 6a + 4c$

B. Summarize What We Learned Today

Directions: Write three sample problems like the ones that we studied today. Be sure to include negative terms, fractions, various operations, and like terms. You will use this explanation as a reference.