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BLM 8–10

Chapter 8 Test

For #1 to #3, circle the best answer.

1. What is the solution for the equation $4(2x - 3) = 4$?

A $\frac{7}{8}$ **B** -1

C $\frac{1}{8}$ **D** 2

2. Andrea determined that the solution to the equation $6(3x - 1) = 4(4x - 5)$ is $x = 7$. Two possible methods for checking Andrea's solution are started below.

Method 1:

$4(4x - 5) = 6(3x - 1)$
$16x - 20 = 18x - 6$
$16x - 18x = -6 + 20$

Ask yourself, "Is the solution correct?"

Method 2:

Left Side	Right Side
$6(3x - 1)$	$4(4x - 5)$
$= 6[3(7) - 1]$	$= 4[4(7) - 5]$
$= 6(21 - 1)$	$= 4(28 - 5)$

A Method 1 is the best procedure to check that Andrea's solution is *correct*.
B Method 2 is the best procedure to check that Andrea's solution is *correct*.
C Method 1 is the best procedure to check that Andrea's solution is *incorrect*.
D Method 2 is the best procedure to check that Andrea's solution is *incorrect*.

3. Manuel was asked to solve the equation $2(8 - x) = 4(2x + 4)$ for x. His solution is shown below.

$2(8 - x) = 4(2x + 4)$
$8 - x = 2(2x + 4)$ Step 1
$8 - x = 4x + 8$ Step 2
$0 = 5x$ Step 3
The solution is undefined. Step 4

In which step did Manuel make his first mistake.

A Step 1 **B** Step 2
C Step 3 **D** Step 4

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Complete the statements in #4 to #7.

4. The solution to the equation $5x = 65$ is _____.

5. The value of y that would make the equation $\frac{y}{1.2} = -6.1$ true is _____.

6. The solution to the equation $\frac{x}{2} - 16 = 9$ is _____.

7. The solution expressed in the form $\frac{a}{b}$ for the equation $2z = \frac{1}{4}$ is $\frac{\square}{\square}$.

Short Answer

8. Find the solution for the variable in each of the following equations.

a) $7x - 19 = 9$

b) $\frac{x}{3} + 4 = -2$

c) $5.2x = 3.2x + 13.2$

d) $-4x + 21 = -7x - 15$

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Written Response

9. Frank has a job at the bottle return depot. Each day he earns $56 plus 15¢ for every box of 1000 recycled containers he counts. On Wednesday, Frank earned $108.50.

a) Write an equation to find how many boxes of 1000 recycled containers Frank counted on Wednesday.

Let n = number of boxes Frank counted

Equation: _____

b) Solve your equation to find how many boxes of 1000 recycled containers Frank counted on Wednesday.

10. Alexandra was given an equation to solve. Alexandra's partial solution is shown below.

$$4(x - 5) - 16 = 0$$
$$4(x - 5) = 16$$
$$4x - 5 = 16$$
$$4x = 21$$

a) Circle Alexandra's mistake.

b) Solve the equation to find the solution for the variable x.

$4(x - 5) - 16 = 0$

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