Lesson 11 Practice Problems

1. Jada says, "I can tell that $\frac{-2}{3}(x + 5) + 4(x + 5) - \frac{10}{3}(x + 5)$ equals 0 just by looking at it." Is Jada correct? Explain how you know.

2. In each row, decide whether the expression in column A is equivalent to the expression in column B. If they are not equivalent, show how to change one expression to make them equivalent.

   A

   B

   a. $3x - 2x + 0.5x$ a. $1.5x$

   b. $3(x + 4) - 2(x + 4)$ b. $x + 3$

   c. $6(x + 4) - 2(x + 5)$ c. $2(2x + 7)$

   d. $3(x + 4) - 2(x + 4) + 0.5(x + 4)$ d. 1.5

   e. $20\left(\frac{2}{5}x + \frac{3}{4}y - \frac{1}{2}\right)$ e. $\frac{1}{2}(16x + 30y - 20)$

3. For each situation, write an expression for the new balance using as few terms as possible.

   a. A checking account has a balance of -$126.89. A customer makes two deposits, one $3\frac{1}{2}$ times the other, and then withdraws $25.

   b. A checking account has a balance of $350. A customer makes two withdrawals, one $50 more than the other. Then he makes a deposit of $75.

   (From Unit 4, Lesson 9.)

4. Tyler is using the distributive property on the expression $9 - 4(5x - 6)$. Here is his work:

$9 - 4(5x - 6)$
$9 + \text{(-4)}(5x + \text{-6})$
$9 + \text{-20}x + \text{-6}$
$3 - 20x$

Mai thinks Tyler's answer is incorrect. She says, "If expressions are equivalent then they are equal for any value of the variable. Why don't you try to substitute the same value for x in all the equations and see where they are not equal?"

   a. Find the step where Tyler made an error.

   b. Explain what he did wrong.

   c. Correct Tyler's work.

(From Unit 4, Lesson 10.)

5.   a. If $(11 + x)$ is positive, but $(4 + x)$ is negative, what is one number that x could be?

   b. If $\text{(-3} + y)$ is positive, but $\text{(-9} + y)$ is negative, what is one number that y could be?

   c. If $\text{(-5} + z)$ is positive, but $\text{(-6} + z)$ is negative, what is one number that z could be?

(From Unit 4, Lesson 3.)

Accelerated 7 Unit 4

Lesson 11

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