Lesson 10 Practice Problems

1.
   - Noah says that $9x - 2x + 4x$ is equivalent to $3x$, because the subtraction sign tells us to subtract everything that comes after $9x$.
   - Elena says that $9x - 2x + 4x$ is equivalent to $11x$, because the subtraction only applies to $2x$.

   Do you agree with either of them? Explain your reasoning.

2. Identify the error in generating an expression equivalent to $4 + 2x - \frac{1}{2}(10 - 4x)$. Then correct the error.

   $4 + 2x + \frac{-1}{2}(10 + -4x)$
   $4 + 2x + -5 + 2x$
   $4 + 2x - 5 + 2x$
   -1

3. Select **all** expressions that are equivalent to $5x - 15 - 20x + 10$.

   A. $5x - (15 + 20x) + 10$

   B. $5x + -15 + -20x + 10$

   C. $5(x - 3 - 4x + 2)$

   D. $-5(-x + 3 + 4x + -2)$

   E. $-15x - 5$

   F. $-5(3x + 1)$

   G. $-15(x - \frac{1}{3})$

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4. The school marching band has a budget of up to $750 to cover 15 new uniforms and competition fees that total $300. How much can they spend for one uniform?

   a. Write an inequality to represent this situation.

   b. Solve the inequality and describe what it means in the situation.

(From Unit 4, Lesson 4.)

5. Solve the inequality that represents each story. Then interpret what the solution means in the story.

   a. For every $9 that Elena earns, she gives x dollars to charity. This happens 7 times this month. Elena wants to be sure she keeps at least $42 from this month's earnings. $7(9 - x) \geq 42$

   b. Lin buys a candle that is 9 inches tall and burns down x inches per minute. She wants to let the candle burn for 7 minutes until it is less than 6 inches tall. $9 - 7x < 6$

(From Unit 4, Lesson 6.)

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