## Unit 6 Lesson 21 Cumulative Practice Problems

* + 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.
1. Identify the error in generating an expression equivalent to $4+2x−\frac{1}{2}(10−4x)$. Then correct the error.
* $4+2x+\frac{-1}{2}(10+-4x)4+2x+-5+2x4+2x−5+2x-1$
1. Select **all** expressions that are equivalent to $5x−15−20x+10$.
	1. $5x−(15+20x)+10$
	2. $5x+-15+-20x+10$
	3. $5(x−3−4x+2)$
	4. $-5(-x+3+4x+-2)$
	5. $-15x−5$
	6. $-5(3x+1)$
	7. $-15(x−\frac{1}{3})$
2. 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?
	1. Write an inequality to represent this situation.
	2. Solve the inequality and describe what it means in the situation.
* (From Unit 6, Lesson 14.)
1. Solve the inequality that represents each story. Then interpret what the solution means in the story.
	1. 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. $7(9−x)\geq 42$
	2. 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 6, Lesson 16.)
1. A certain shade of blue paint is made by mixing $1\frac{1}{2}$ quarts of blue paint with 5 quarts of white paint. If you need a total of 16.25 gallons of this shade of blue paint, how much of each color should you mix?
* (From Unit 4, Lesson 3.)



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