## Unit 4 Lesson 5 Cumulative Practice Problems

1. Solve each of these equations. Explain or show your reasoning.
* $2(x+5)=3x+1$
* $3y−4=6−2y$
* $3(n+2)=9(6−n)$
*
1. Clare was solving an equation, but when she checked her answer she saw her solution was incorrect. She knows she made a mistake, but she can’t find it. Where is Clare’s mistake and what is the solution to the equation?
* $\begin{matrix}12(5+2y)&=4y−(5−9y)\\72+24y&=4y−5−9y\\72+24y&=-5y−5\\24y&=-5y−77\\29y&=-77\\y&=\frac{-77}{29} \end{matrix}$
1. Solve each equation, and check your solution.
* $\frac{1}{9}(2m−16)=\frac{1}{3}(2m+4)$
* $-4(r+2)=4(2−2r)$
* $12(5+2y)=4y−(6−9y)$
*
1. Here is the graph of a linear equation.
* Select **all** true statements about the line and its equation.
* 
	1. One solution of the equation is $(3,2)$.
	2. One solution of the equation is $(-1,1)$.
	3. One solution of the equation is $\left(1,\frac{3}{2}\right)$.
	4. There are 2 solutions.
	5. There are infinitely many solutions.
	6. The equation of the line is $y=\frac{1}{4}x+\frac{5}{4}$.
	7. The equation of the line is $y=\frac{5}{4}x+\frac{1}{4}$.
* (From Unit 3, Lesson 13.)
1. A participant in a 21-mile walkathon walks at a steady rate of 3 miles per hour. He thinks, “The relationship between the number of miles left to walk and the number of hours I already walked can be represented by a line with slope $-3$.” Do you agree with his claim? Explain your reasoning.
* (From Unit 3, Lesson 9.)



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