## Unit 5 Lesson 16 Cumulative Practice Problems

1. Kiran and his cousin work during the summer for a landscaping company. Kiran's cousin has been working for the company longer, so his pay is 30% more than Kiran's. Last week his cousin worked 27 hours, and Kiran worked 23 hours. Together, they earned $493.85. What is Kiran's hourly pay? Explain or show your reasoning.
2. Decide which story can be represented by the system of equations $y=x+6$ and $x+y=100$. Explain your reasoning.
	1. Diego’s teacher writes a test worth 100 points. There are 6 more multiple choice questions than short answer questions.
	2. Lin and her younger cousin measure their heights. They notice that Lin is 6 inches taller, and their heights add up to exactly 100 inches.
3. Clare and Noah play a game in which they earn the same number of points for each goal and lose the same number of points for each penalty. Clare makes 6 goals and 3 penalties, ending the game with 6 points. Noah earns 8 goals and 9 penalties and ends the game with $-22$ points.
	1. Write a system of equations that describes Clare and Noah's outcomes. Use $x$ to represent the number of points for a goal and $y$ to represent the number of points for a penalty.
	2. Solve the system. What does your solution mean?
4. Solve: $\left\{\begin{matrix}y=6x−8\\y=-3x+10\end{matrix}\right.$
* (From Unit 5, Lesson 15.)
	1. Estimate the coordinates of the point where the two lines meet.
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	1. Choose two equations that make up the system represented by the graph.
		1. $y=\frac{5}{4}x$
		2. $y=6−2.5x$
		3. $y=2.5x+6$
		4. $y=6−3x$
		5. $y=0.8x$
	2. Solve the system of equations and confirm the accuracy of your estimate.
* (From Unit 5, Lesson 14.)



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