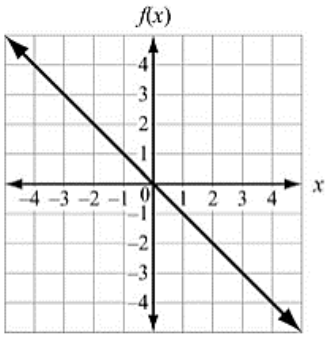
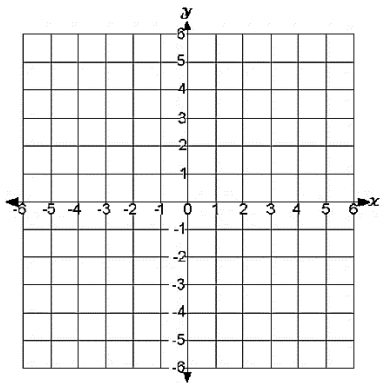
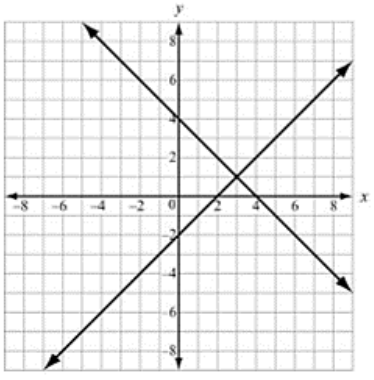
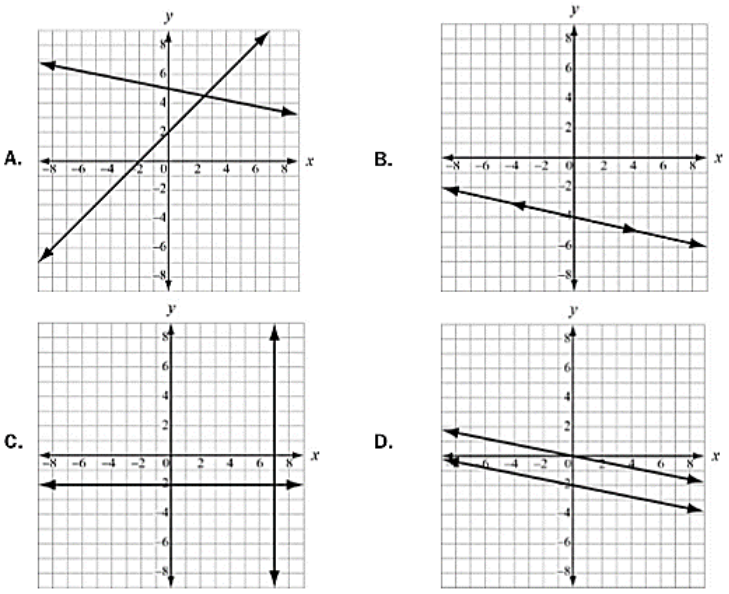
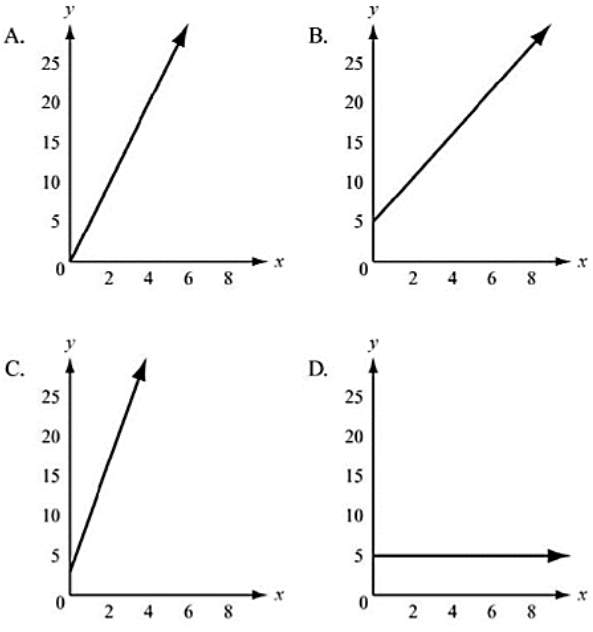
GSE Algebra 1 Unit 2 - REASONING WITH LINEAR EQUATIONS AND INEQUALITIES EOC Review

Name: _____ Block: _____

1. Karla wants to save up for a prom dress. She figures she can save $9 each week from the money she earns babysitting. If she plans to spend less than $150 for the dress, how many weeks will it take her to save enough money to buy any dress in her price range	2. Two cars start at the same point and travel in opposite directions. The first car travels 15 miles per hour faster than the second car. In 4 hours, the cars are 300 miles apart. Use the formula below to determine the rate of the second car $4(r + 15) + 4r = 300$	3. Solve the equation 14 = ax + 6 for x. Show and justify your steps.
4. Solve this system of equations. $y = 2x - 4$ $x = y + 1$	5. Solve this system of equations. $2x - y = 1$ $5 - 3x = 2y$	6. Solve this system of equation. $3x - 2y = 7$ $2x - 3y = 3$
7. Is (3, –1) a solution of this system? $y = 2 - x$ $3 - 2y = 2x$	8. Solve this system of equations. $x - 3y = 6$ $-x + 3y = -6$	9. Solve this system $-3 - y = 10$ $3x + y = -8$
10. Consider the graph of $f(x) = -x$. It appears to be an unbroken line and slanted downward. 	Domain: Range: x-intercept: y-intercept: Increasing: Decreasing: Rate of change: End behavior:	11. Graph the inequality x + 2y < 4. 

	Answers
1. This equation can be used to find h, the number of hours it will take Flo and Bryan to mow their lawn. $\frac{h}{3}+\frac{h}{6}=1$ How many hours will it take them to mow their lawn? A . 6 hours B . 3 hours C . 2 hours D . 1 hour	1. _____
2. For what values of x is the inequality $\frac{2}{3}+\frac{x}{3}>1$ true? A . x < 1 B . x > 1 C . x < 5 D . x > 5	2. _____
3. Look at the steps used when solving 3(x – 2) = 3 for x . Which step is the result of combining like terms? A . Step 1 B . Step 2 C . Step 3 D . Step 4 $3(x-2)=3$ Write the original equation. $3x-6=3$ Use the Distributive Property. $3x-6+6=3+6$ Step 1 $3x=9$ Step 2 $\frac{3x}{3}=\frac{9}{3}$ Step 3 $x=3$ Step 4	3. _____
4. Two lines are graphed on this coordinate plane . Which point appears to be a solution of the equations of both lines? A . (0, –2) B . (0, 4) C . (2, 0) D . (3, 1) 	4. _____
5. Which ordered pair is a solution of 3y + 2 = 2x – 5 ? A . (–5, 2) B . (0, –5) C . (5, 1) D . (7, 5)	5. _____

	Answers
6. Based on the tables, at what point do the lines y = –x + 5 and y = 2x – 1 intersect? A . (1, 1) B . (3, 5) C . (2, 3) D . (3, 2) $y = -x + 5$ x | y –1 | 6 0 | 5 1 | 4 2 | 3 3 | 2 $y = 2x - 1$ x | y –1 | –3 0 | –1 1 | 1 2 | 3 3 | 5	6. _____
7. A manager is comparing the cost of buying baseball caps from two different companies . • Company X charges a $50 fee plus $7 per baseball cap . • Company Y charges a $30 fee plus $9 per baseball cap . For what number of baseball caps will the cost be the same at both companies? A . 10 B . 20 C . 40 D . 100	7. _____
8. A shop sells one-pound bags of peanuts for $2 and three-pound bags of peanuts for $5 . If 9 bags are purchased for a total cost of $36, how many three-pound bags were purchased? A . 3 B . 6 C . 9 D . 18	8. _____
9. A wild horse runs at a rate of 8 miles an hour for 6 hours . Let y be the distance, in miles, the horse travels for a given amount of time, x, in hours . This situation can be modeled by a function . Which of these describes the domain of the function? A . $0 \le x \le 6$ B . $0 \le y \le 6$ C . $0 \le x \le 48$ D . $0 \le y \le 48$	9. _____
10. If f(12) = 4(12) – 20, which function gives f(x)? A . f(x) = 4x B . f(x) = 12x C . f(x) = 4x – 20 D . f(x) = 12x – 20	10. _____

	Answers
11. Which graph represents a system of linear equations that has multiple common coordinate pairs?  	11. _____
12. Which function is modeled in this table? A . f(x) = x + 7 B . f(x) = x + 9 C . f(x) = 2x + 5 D . f(x) = 3x + 5 | x	f(x) | |---|---| | 1 | 8 | | 2 | 11 | | 3 | 14 | | 4 | 17 |	12. _____
13. To rent a canoe, the cost is $3 for the oars and life preserver, plus $5 an hour for the canoe . Which graph models the cost of renting a canoe?  	13. _____