## UNIT 4 SYSTEMS STUDY GAIDE

Match each graph with the appropriate solution.



State whether the following systems have one solution, no solution, or infinitely many solutions.

5.	$y = 3 \times + 1$	6. y = 3× + 1
	y = -3x + 7	y = × + 1

 7. x + y = 8 8. x + y = -4 

 2x + 2y = 16 x + y = 6 

Below is the graph for one of the equations in a system of two equations. The solution to the



14. Sixty people attend a game night. Everyone chooses to play either checkers, a two-person game, or bridge, a card game that has four-players. All 60 people are playing either checkers or bridge.

a. Complete the table showing some possible combinations of the number of each type of game being.

Checkers (x)	Bridge (y)
2	
	1
30	
	10

- b. There are 3 more games of bridge being played than games of checkers being played. Write a system of equations to represent this situation.
- c. How many of each game are being played? Explain or show your reasoning.



15. Line F is resented by the equation y = 2x + 1. Line G is shown on the graph to the right. If line F is graphed on the same coordinate plane as line G, at what point would the two lines intersect?

16. A system of equations is shown below: y = 5x + 10 y = 10x - 5What is the value of x + y?

17. Line f goes through the points (8, 1) and (-1, 7). Line g goes through the points (1, 3) and (-2, 3). What is the point of intersection of lines f and g?

18. Line k goes through the points (-5, 3) and (-2, 1). Line m goes through the points (0, -3) and (2, 1). What is the point of intersection of lines k and m?

19. James paid an initial fee of \$6.00 for a movie rental service. Each

rented. At what point are the prices of the two services the same?

20. Lyft charges \$1.80 plus \$0.20 a mile. Uber charges \$2.10 plus \$0.15 a mile. For what distance will the rides cost the same?

time he rents a movie he is charged \$2.00. Sarah uses a different movie rental service that

charges based on the equation y = 3x + 4, where y is the total cost and x is the number of movies





6

