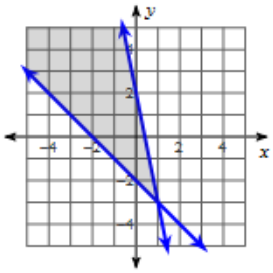
HW - *Unit 4 Test Review* (Lessons 20A-24) Name_____ Per____

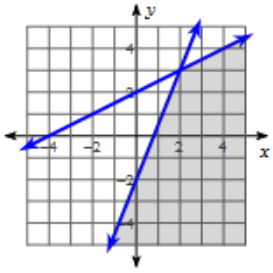
Which graph goes with the given system of Inequalities?

1) $y \le -5x + 2$
$y \ge -x - 2$

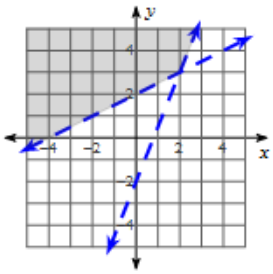
A)



B)

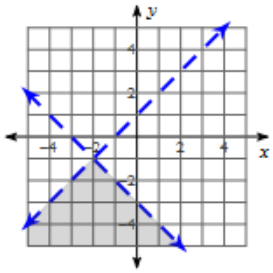


C)

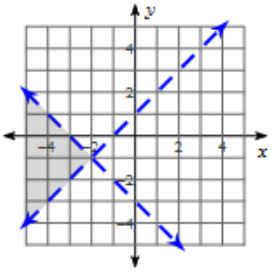


2) $x - y < -1$
$x + y < -3$

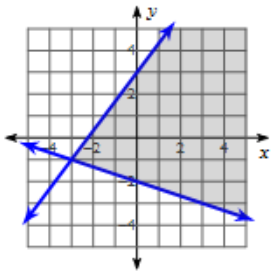
A)



B)



C)



Solve each system using substitution.

3. $y = 2x - 3$
$4x - 2y = 2$

4. $3x - 2y = 6$
$2y = 6$

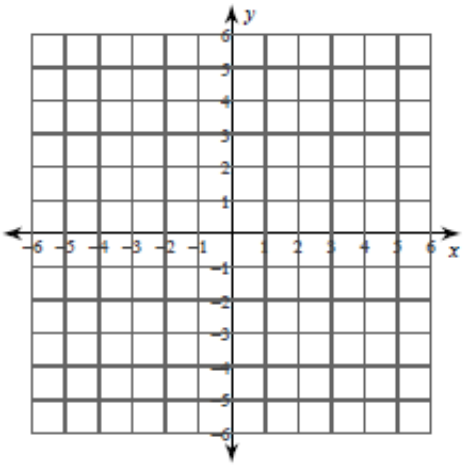
Solve each system using any method.

5. $4x + 3y = 4$
$2x + 5y = 2$

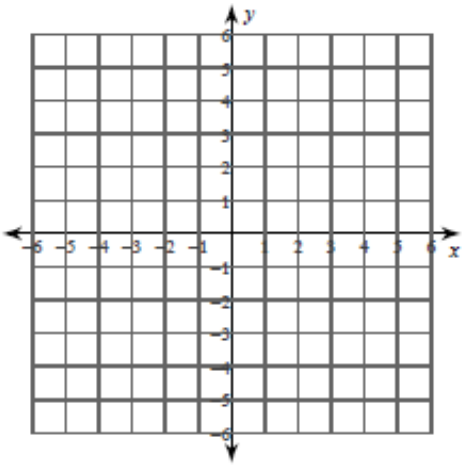
6. $x = y + 3$
$x + y = 7$

Sketch the graph of each inequality.

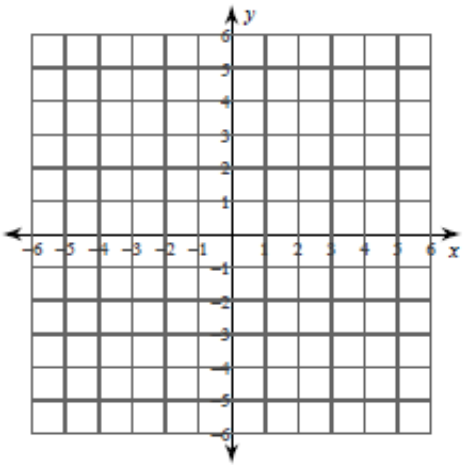
7) $y \geq 2x - 1$



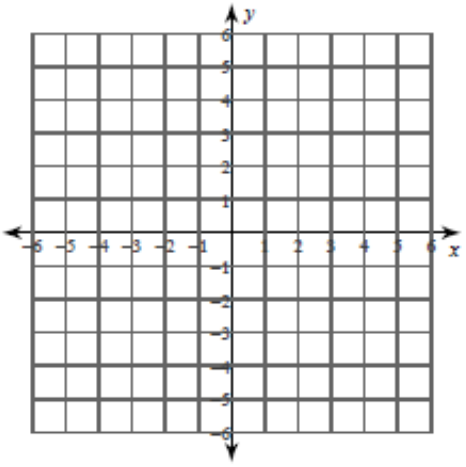
8) $x \geq 5$



9) $y > -\frac{5}{4}x + 4$

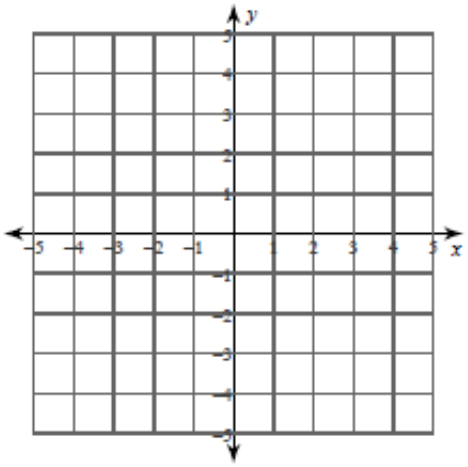


10) $x + 2y < -2$

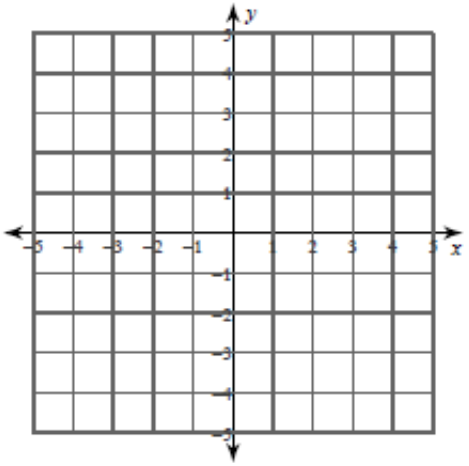


Graph the inequality system.

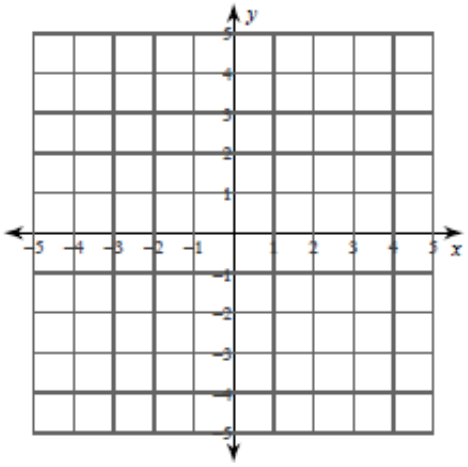
11) $y < -3x - 1$
$y \geq x + 3$



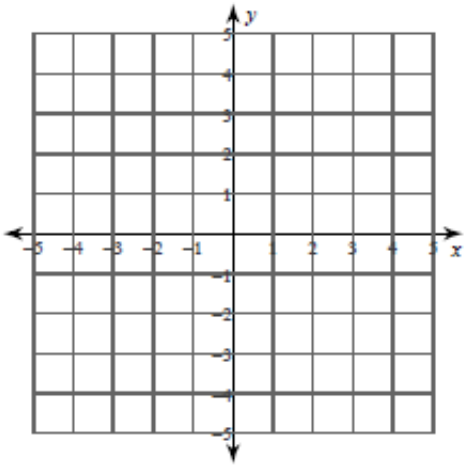
12) $y \geq -\frac{4}{3}x + 2$
$y > \frac{1}{3}x - 3$



13) $y \leq -\frac{4}{3}x - 3$
$y \geq \frac{1}{3}x + 2$



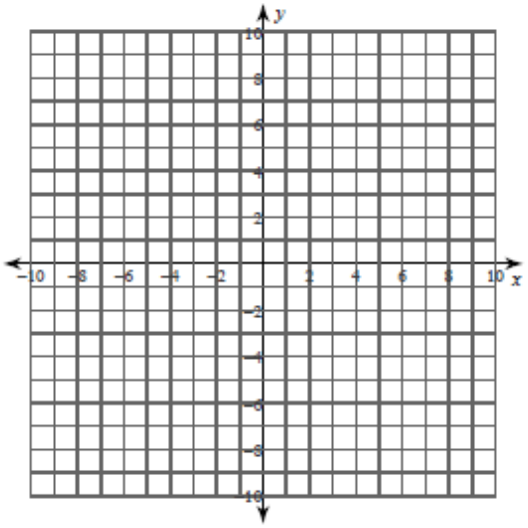
14) $x - y > 3$
$2x + y < 3$



Solve each system by graphing.

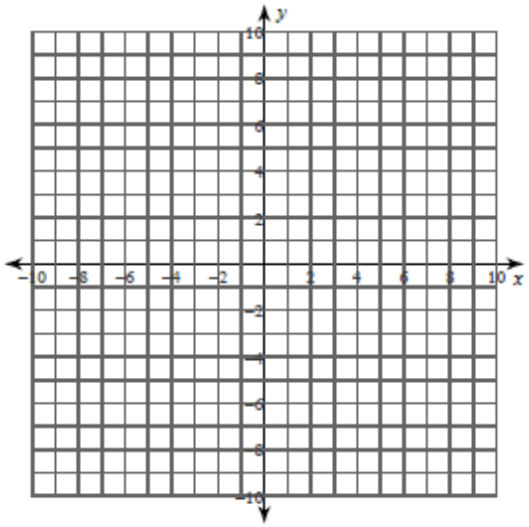
15) $y = \frac{2}{9}x + 3$

$y = -\frac{7}{9}x - 6$



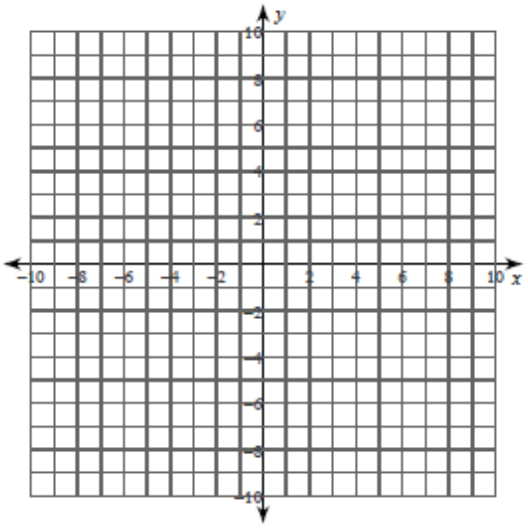
16) $y = \frac{1}{2}x - 8$

$y = 3x - 3$



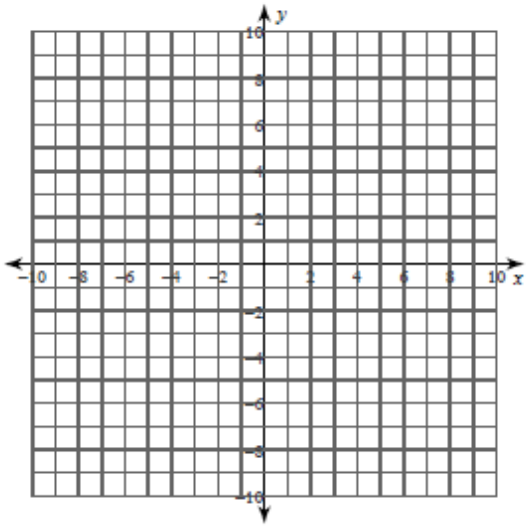
17) $2x - y = 2$

$2x - 3y = 18$



18) $4x - 7y = -21$

$16x - 7y = 63$



19. *Cami bought 3 lattes and 5 mochas for her friends for $34. Ingrid bought 4 lattes and 3 mochas(at the same shop) for her friends for $27. Set up a system of equations to find the cost of a latte and the cost of a mocha.*

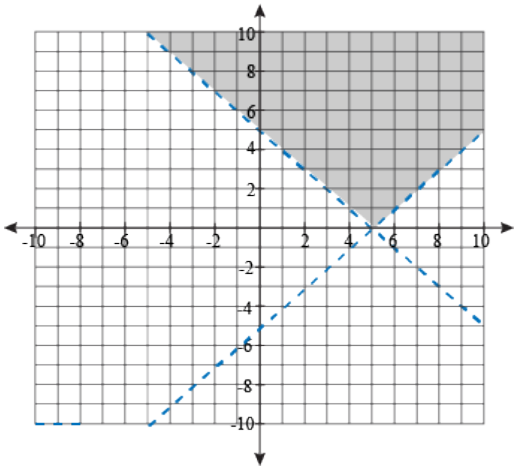
Solve the following systems of equations using substitution or elimination.

20. $\begin{aligned} 2x-2y&=-18 \\ -10x-10y&=10 \end{aligned}$

21. $\begin{aligned} -2x+4y&=18 \\ 5x+5y&=-30 \end{aligned}$

22. Samantha is doing chores at home. She can vacuum a room for $2 or wash and fold a load of laundry for $3. One month she accomplished 25 chores and earned a total of $64. Write a system of equations to model the situation, and then determine how many of each type of chore she did that month.

Use the graph on the right to answer the following questions.



23. Is (5, 4) a solution to the system of inequalities? How do you know?

24. Is (2 ,3) a solution to the system of inequalities? How do you know?

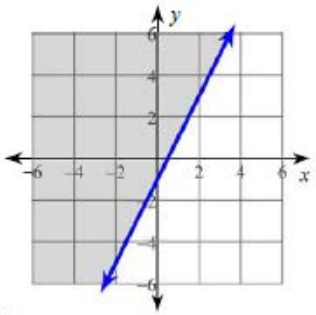
25. Is (6, 5.7) a solution to the system of inequalities? How do you know?

26. If I told you that the solutions to this system represented number of girls (*x*) and number of boys (*y*) at a high school dance, would that change your answer to #25? Why or why not?

Answers

1. A	2. B	3. No solutions	4. (4, 3)
5. (1, 0)	6. (5, 2)		

7)



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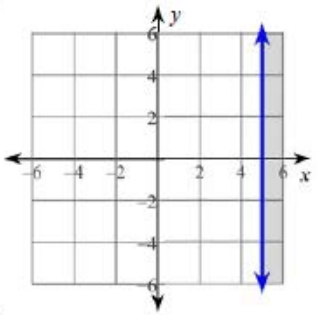

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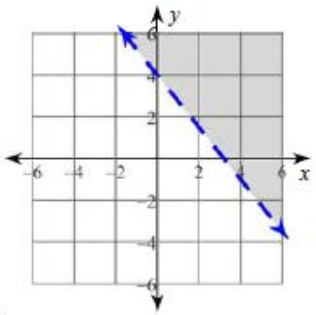

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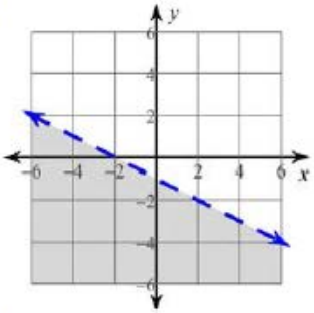

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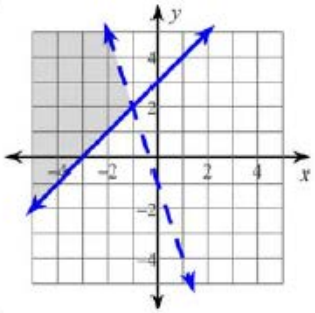

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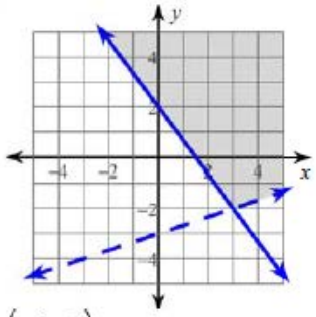

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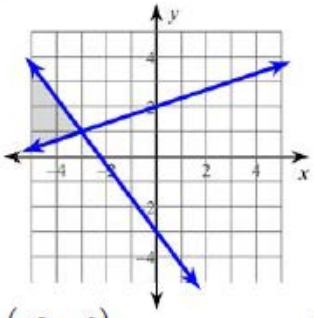
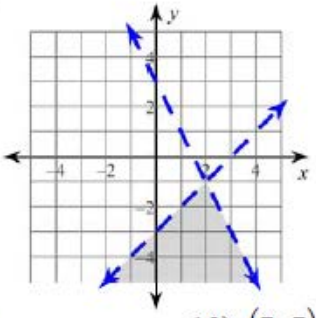


14)



15) $(-9, 1)$

16) $(-2, -9)$

17) $(-3, -8)$

18) $(7, 7)$

19. 3L + 5m = 34 4L + 3m = 15 Lattes are $3 each and mochas are $5 each.	20. (-5,4)	21. (-7,1)	22. 11 rooms vacuumed and 14 loads of laundry completed
23. Yes, explanations will vary.	24. No, explanations will vary.	25. Yes, explanations will vary.	26. Yes, it would change my answer to #25 since you cannot have a part of a girl or boy. You can have whole numbers only.