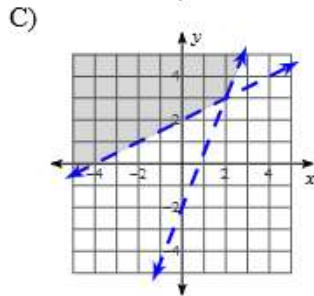
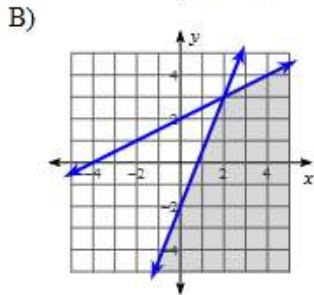
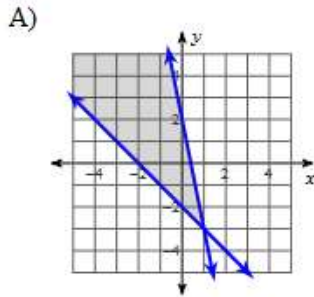


Unit 4 Test Review (Lessons 17-24)

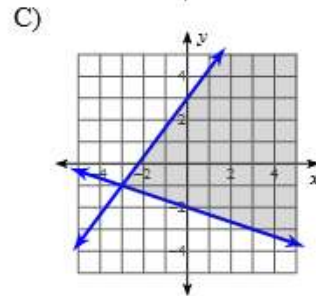
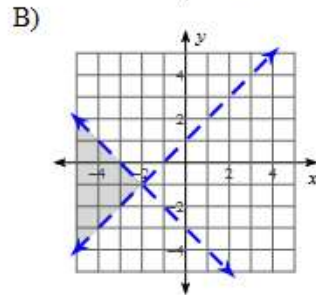
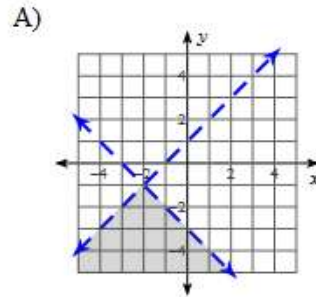
Name _____ Per _____

Which graph goes with the given system of Inequalities?

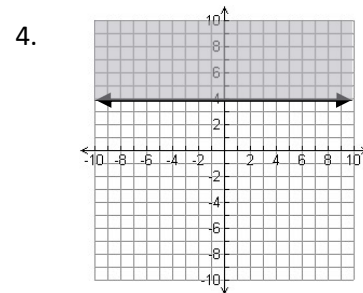
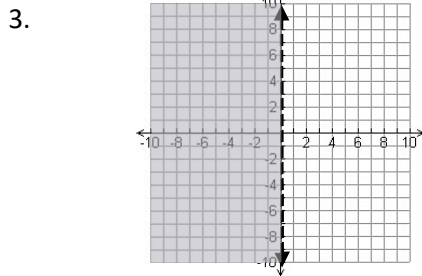
1) $y \leq -5x + 2$
 $y \geq -x - 2$



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



#3-4 Write an inequality that represents each graph.

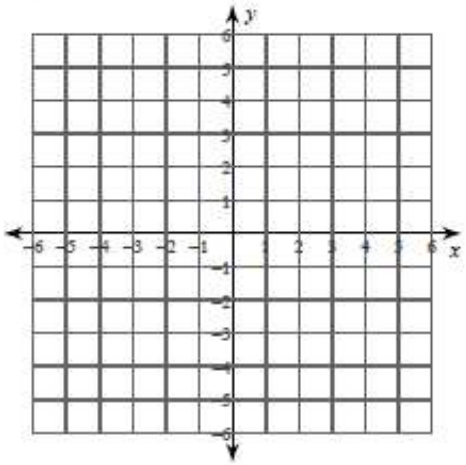


5. What is the solution for a system of linear equations that has the same slope and same y-intercept?

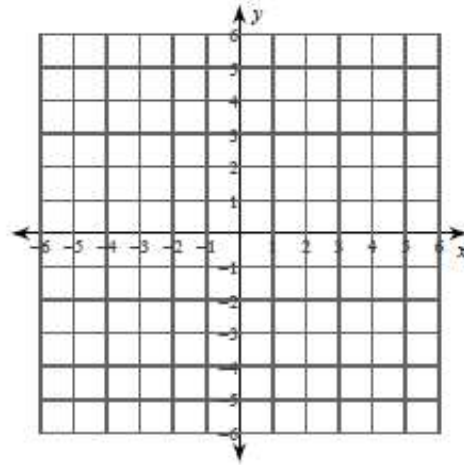
6. What is the solution for a system of linear equations that has the same slope and different y-intercepts?

From #7-9 graph each inequality.

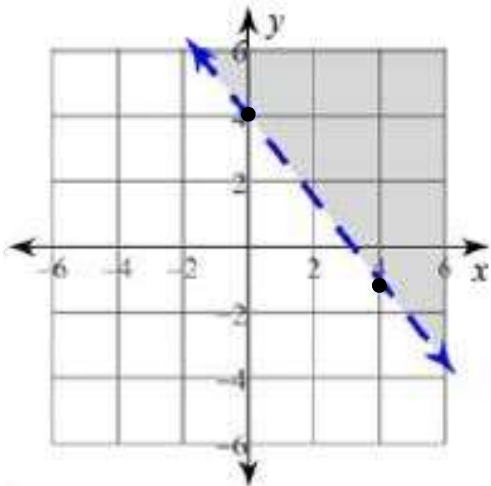
7) $y \geq 2x - 1$



8) $x \geq 5$

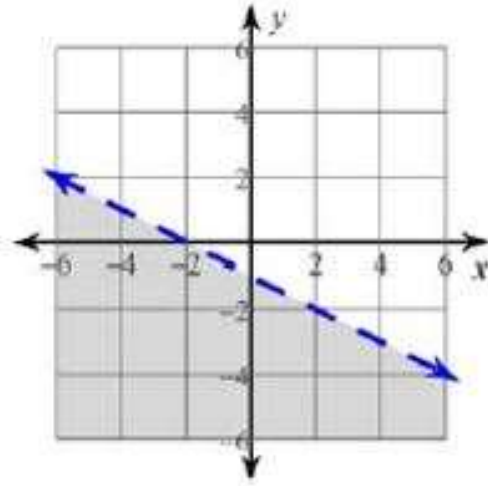


9) Write an inequality that describes the graph below.



Inequality: _____

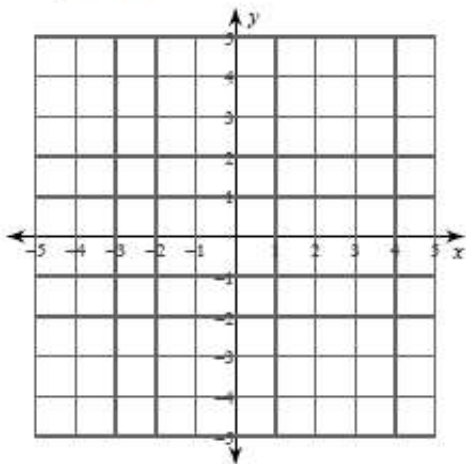
10) Write an inequality that describes the graph below.



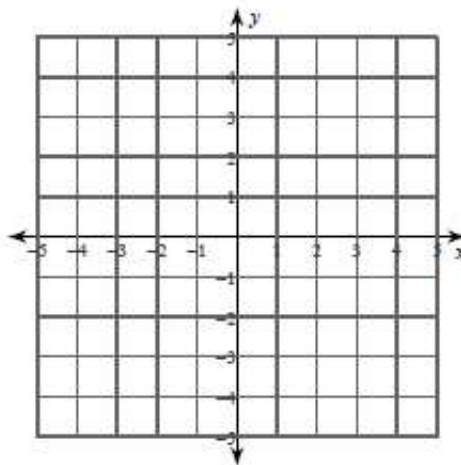
Inequality: _____

Graph the systems of inequalities.

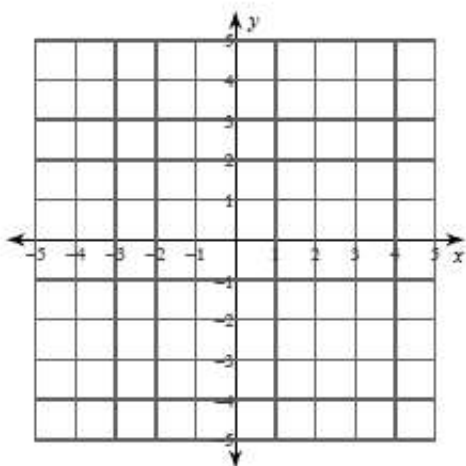
11) $y < -3x - 1$
 $y \geq x + 3$



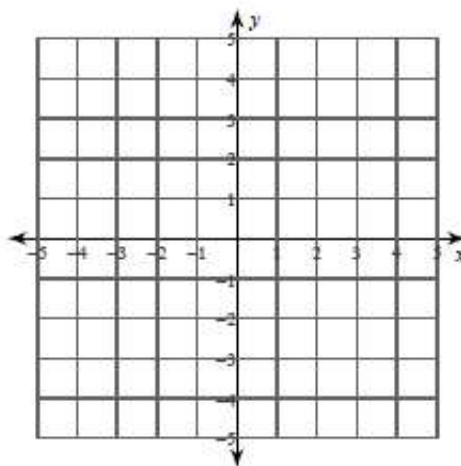
12) $y \geq -\frac{4}{3}x + 2$
 $y > \frac{1}{3}x - 3$



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



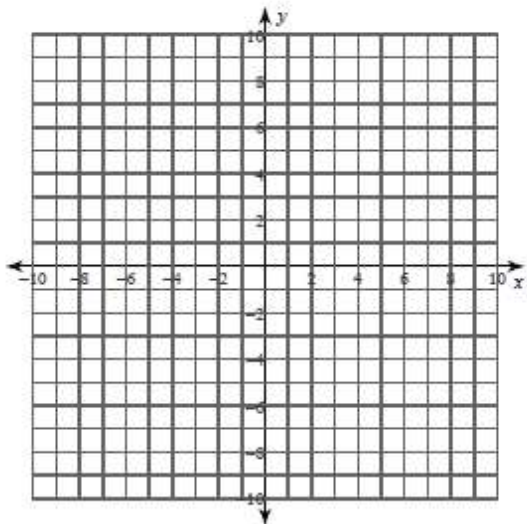
14) $x - y > 3$
 $2x + y < 3$



Solve each system by graphing.

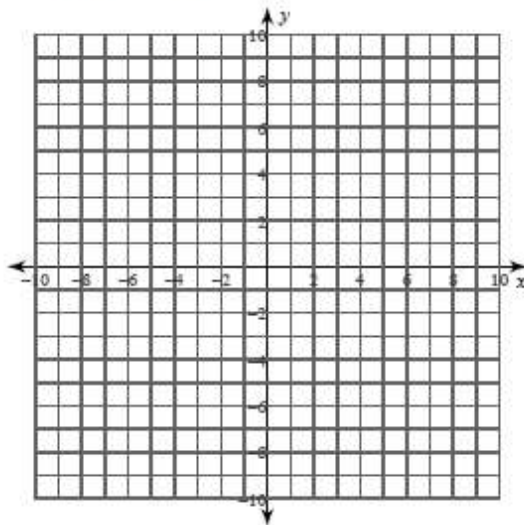
15) $y = \frac{2}{9}x + 3$

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

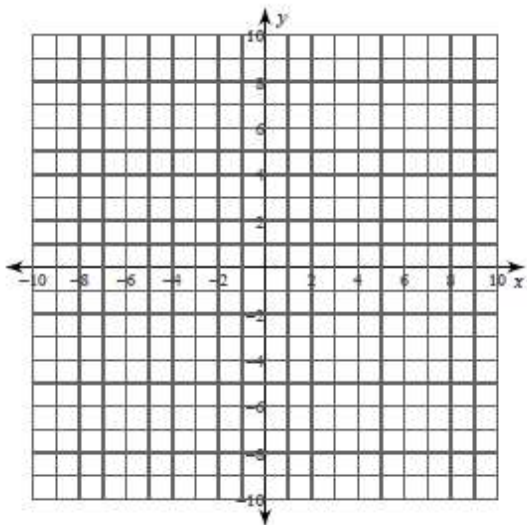


16) $y = \frac{1}{2}x - 8$

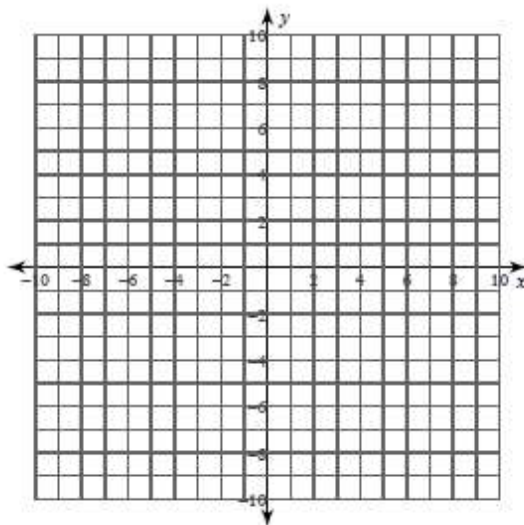
$y = 3x - 3$



17) $2x - y = 2$
 $2x - 3y = 18$



18) $4x - 7y = -21$
 $16x - 7y = 63$



19. John is messing with his little sister. He tells her that he is holding \$1.95 behind his back and that he is holding exactly 9 coins. He says, "I'll only give you the money if you can tell me how many dimes and quarters I have!" Help his little sister get the money. How many of each type of coin is John holding? Set up a system of equations and solve.

Solve the following systems of equations by using substitution or elimination.

20.
$$\begin{aligned} -2x + 4y &= 18 \\ 5x + 5y &= -30 \end{aligned}$$

Solution: _____

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

Solution: _____

22.
$$\begin{aligned} y &= 5x - 2 \\ -3x + 6y &= -12 \end{aligned}$$

Solution: _____

23.
$$\begin{aligned} 2x + y &= 20 \\ 6x &= 5y + 12 \end{aligned}$$

Solution: _____

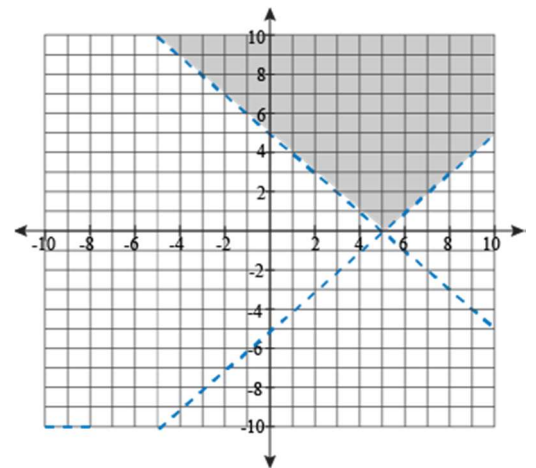
24. Samantha is doing chores at home. She can vacuum a room for \$2 or wash and fold a load of laundry for \$3. One month she accomplished 25 chores and earned a total of \$64. Write a system of equations to model the situation, and then determine how many of each type of chore she did that month.

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

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

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

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



28. 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 #27? Why or why not?

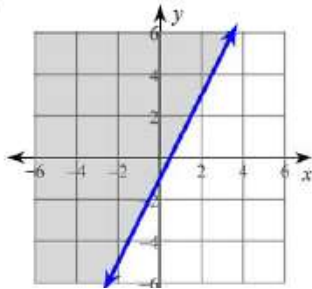
29. A pharmacist needs 100 gallons of 50% alcohol solutions. She has a 30% and 80% alcohol solution available. How much of each should she use?

30. Pure salt is to be added to a 10% salt mix to get 9 ounces of a 20% salt mix. How much of each should be used?

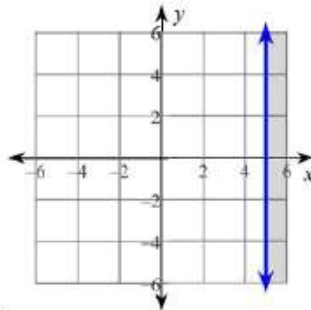
Answers

1. A	2. B	3. $x < 0$	4. $y \geq 4$
5. Infinitely many solutions	6. No Solution		

7)



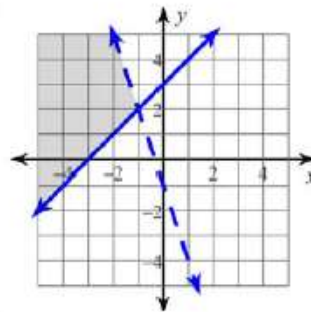
8)



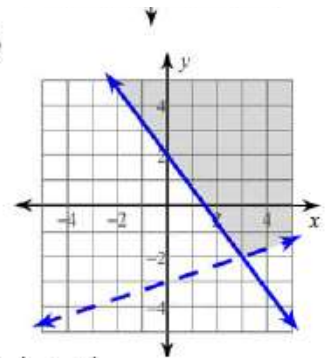
9) $y > -\frac{5}{4}x + 4$

10) $y < -\frac{1}{2}x - 1$

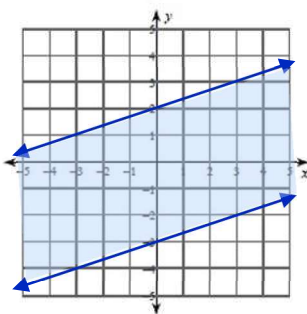
11)



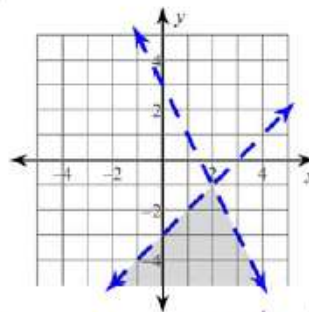
12)



13)



14)



15) $(-9, 1)$

16) $(-2, -9)$

17) $(-3, -8)$

18) $(7, 7)$

19. $d + q = 9$ $.10d + .25q = 1.95$ John is holding 2 dimes and 7 quarters.	20. $(-7, 1)$	21. No solution	22. $(0, -2)$
23. $(7, 6)$	24. 11 rooms vacuumed and 14 loads of laundry completed	25. Yes, explanations will vary.	26. No, explanations will vary.
27. Yes, explanations will vary.	28. Yes, it would change my answer to #27 since you cannot have a part of a girl or boy. You can have whole numbers only.	29. 60 gal of 30% 40 gal of 80%	30. 1 oz of pure salt 8 oz of 10% mix