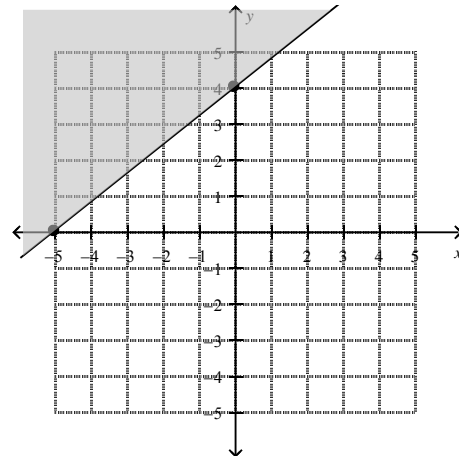


Solving Linear Systems Review

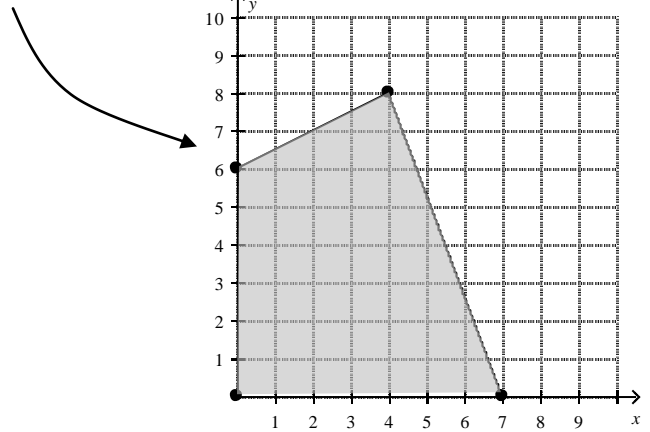
- #2 – 3. Find the slope of the line through the pair of points.**

16. $\begin{cases} x \geq 0 \\ y > -4 \end{cases}$



Name: _____ Date: _____ Class: _____

17. Find the values of x and y that maximize the objective function $P = 2x + 5y$ for the graph. What is the maximum value?



18. Given the system of constraints, name all vertices.
Then find the maximum value of the given objective function.

$$\begin{cases} x \geq 0 \\ y \geq 0 \\ 3x - y \leq 6 \\ 5y \leq 5x + 10 \end{cases}$$

Maximum for $P = 8x - 5y$

(use graph on attached sheet)

19. A gold processor has two sources of gold ore, source A and source B. In order to keep his plant running, at least 4 tons of ore must be processed each day. Source A costs \$15 per ton to process, and source B costs \$5 per ton to process. Costs must be kept to less than \$60 per day. The amount of source B cannot exceed three times the amount of source A. They can **extract** 3 oz. of gold per ton from source A, and **extract** 4 oz. of gold per ton from source B. How many tons of ore from both sources must be processed each day to **maximize the amount of gold extracted**?
(see attached sheet for graph).

#20 – 21. Solve the system by the method of substitution.

20.
$$\begin{cases} 3x + y = -12 \\ 2x - 5y = -8 \end{cases}$$

21.
$$\begin{cases} x - 2y = 0 \\ 5x - y = -9 \end{cases}$$

#22 – 25. Use the elimination method to solve the system.

22.
$$\begin{cases} 4x - 3y = 5 \\ 4x - 5y = 11 \end{cases}$$

23.
$$\begin{cases} 4x + 2y = -12 \\ 5x - 5y = 15 \end{cases}$$

24.
$$\begin{cases} x - 2y = -3 \\ -x + 2y = -1 \end{cases}$$

25.
$$\begin{cases} x - 3y = 6 \\ 3x - 9y = 18 \end{cases}$$

26. Your club is baking vanilla and chocolate cakes for a bake sale. They need at most 20 cakes. You cannot have more than 12 vanilla cakes. Write and graph a system of inequalities to model this system (see attached sheet for graph).
27. A new restaurant needs to make a combined total of 32 menus. The number of lunch menus needed is three times the number of breakfast menus needed. Based on this information, would it be reasonable for the restaurant to make 20 lunch menus and 12 breakfast menus? Why or why not?

Name: _____ Date: _____ Class: _____

SPIRAL: From Functions Unit:

28. Use interval notation to represent the set of numbers.



29. Write the equation that is the translation of $y = \sqrt{x}$ right 1 unit and up 5 units.

#30 – 31. Evaluate the following expression given the following functions: $f(x) = 2x + 1$ $h(x) = x^2 - 7$

30. $f(3) - h(4)$

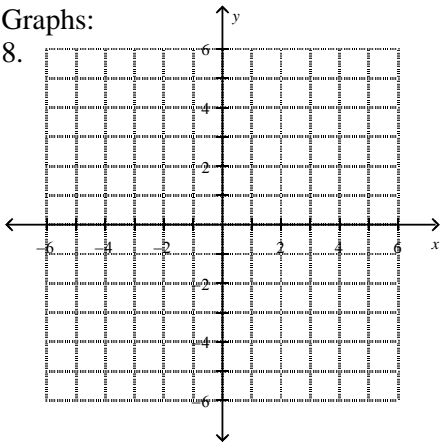
31. $2h(2) + 3f(-2)$

32. Describe in words the transformation on the graph of $h(x) = 3(2^x)$ from the graph of $f(x) = 2^x$.

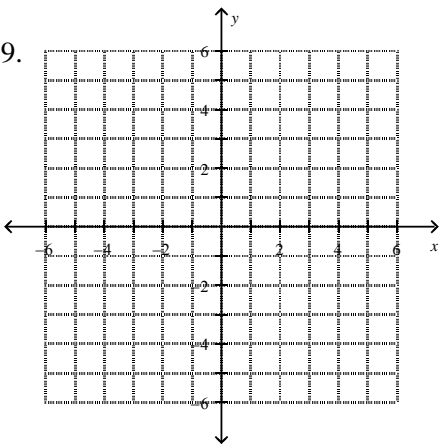
33. Describe in words the transformation on the graph of $g(x) = -|x - 4|$ from the graph of $f(x) = |x|$.

Graphs:

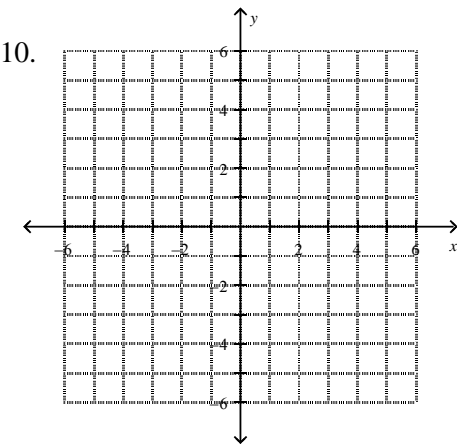
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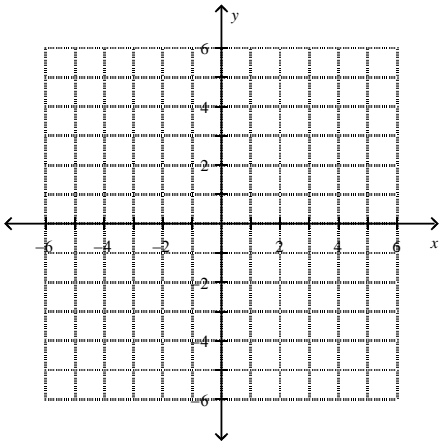
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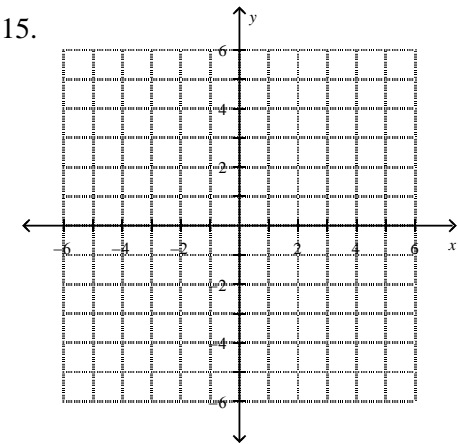
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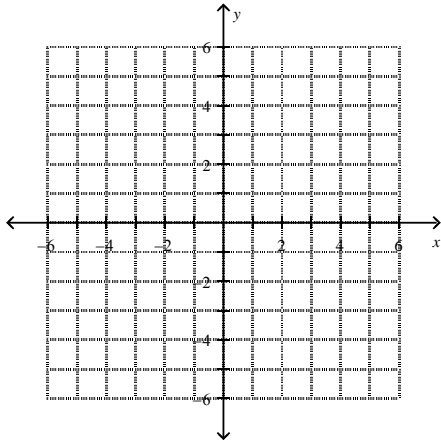
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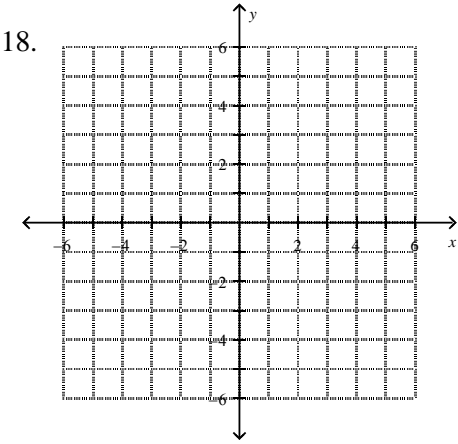
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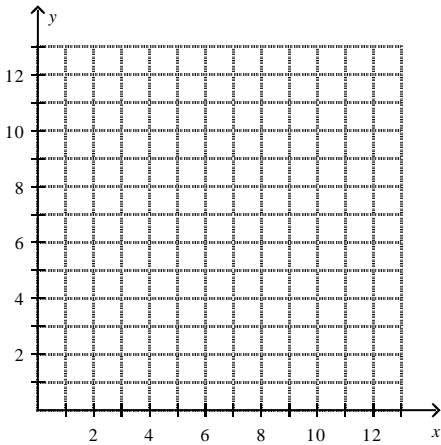
16.



18.



19.



26.

