Algebra 2 Name_____

Chapter 3- Review for Final

Date_____ Period____

Solve each system by substitution.

1) $6x + 5y = -7$
$x - 8y = -10$

Solve each system by elimination.

2) $10x - 2y = 20$
$20x - 10y = 10$

3) $6x + 4y = 2$
$-9x + 3y = -12$

4) $-6x + 3y - 6z = -21$
$-x + 6y + 3z = -19$
$5x - 6y - z = 17$

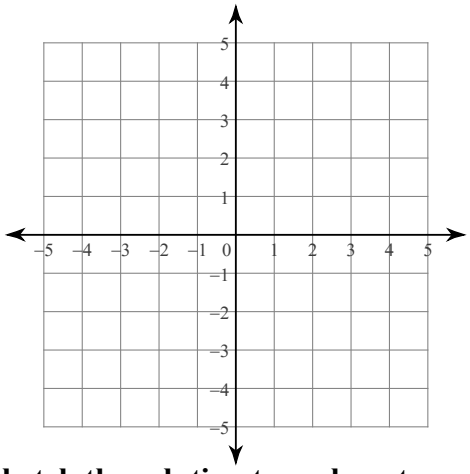
5) $6x + 5y + 4z = 6$
$-2x - y - 4z = 10$
$4x + 5y + 4z = 2$

6) Carlos and Molly are selling fruit for a school fundraiser. Customers can buy small boxes of tangerines and large boxes of tangerines. Carlos sold 7 small boxes of tangerines and 12 large boxes of tangerines for a total of $270. Molly sold 6 small boxes of tangerines and 2 large boxes of tangerines for a total of $74. Find the cost each of one small box of tangerines and one large box of tangerines.

Solve each system by graphing.

7) $y = -\frac{5}{3}x + 2$

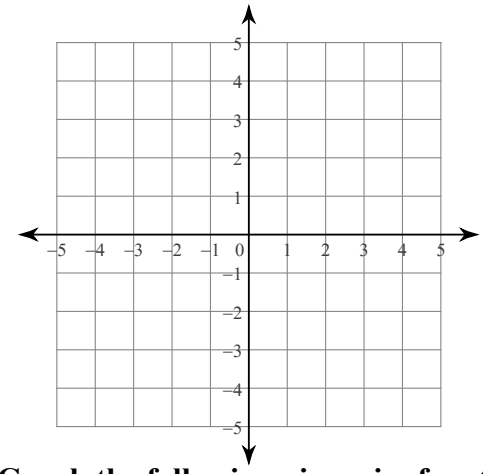
$y = \frac{1}{3}x - 4$



Sketch the solution to each system of inequalities.

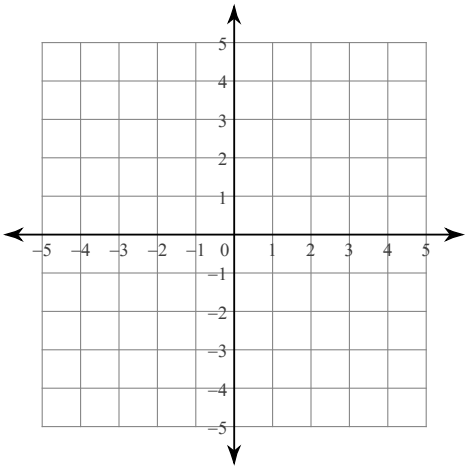
8) $y \le -4x + 2$

$y > -x - 1$



9) $y \ge -x + 1$

$y \le x + 3$



Graph the following piecewise function.

10) $f(x) = \begin{cases} -3x + 1 & \text{when } x < -1 \\ 2x - 4 & \text{when } x \ge -1 \end{cases}$

11) $f(x) = \begin{cases} \frac{1}{2}x - 3 & \text{when } x < 2 \\ -\frac{3}{2}x + 7 & \text{when } x \ge 2 \end{cases}$

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$(-2, 1)$

Solve each system by elimination.

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$20x - 10y = 10$

$(3, 5)$

3) $6x + 4y = 2$
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$(1, -1)$

4) $-6x + 3y - 6z = -21$
$-x + 6y + 3z = -19$
$5x - 6y - z = 17$

$(-2, -5, 3)$

5) $6x + 5y + 4z = 6$
$-2x - y - 4z = 10$
$4x + 5y + 4z = 2$

$(2, 2, -4)$

6) Carlos and Molly are selling fruit for a school fundraiser. Customers can buy small boxes of tangerines and large boxes of tangerines. Carlos sold 7 small boxes of tangerines and 12 large boxes of tangerines for a total of $270. Molly sold 6 small boxes of tangerines and 2 large boxes of tangerines for a total of $74. Find the cost each of one small box of tangerines and one large box of tangerines.

small box of tangerines: $6, large box of tangerines: $19

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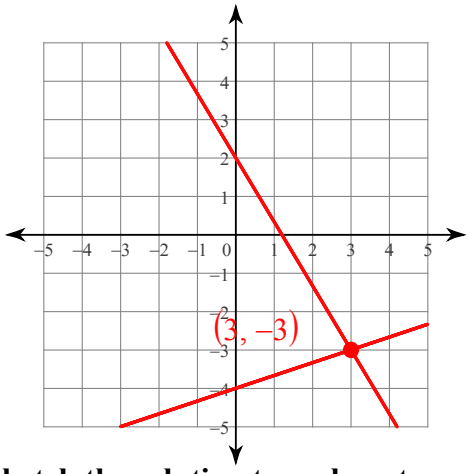

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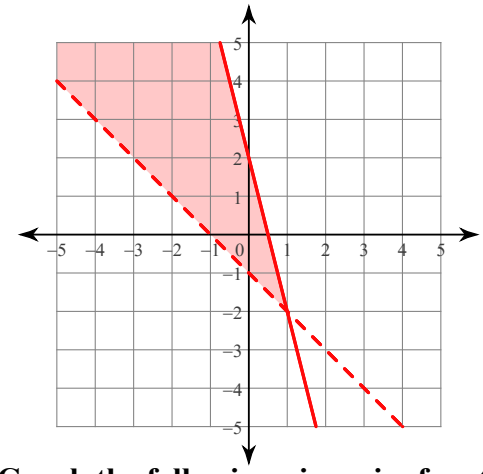

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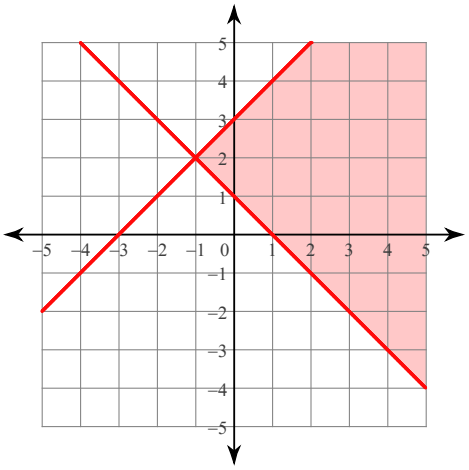

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10) $f(x) = \begin{cases} -3x + 1 & \text{when } x < -1 \\ 2x - 4 & \text{when } x \ge -1 \end{cases}$

The dot next to the choice indicates that it is the answer.

11) $f(x) = \begin{cases} \frac{1}{2}x - 3 & \text{when } x < 2 \\ -\frac{3}{2}x + 7 & \text{when } x \ge 2 \end{cases}$

The dot next to the choice indicates that it is the answer.