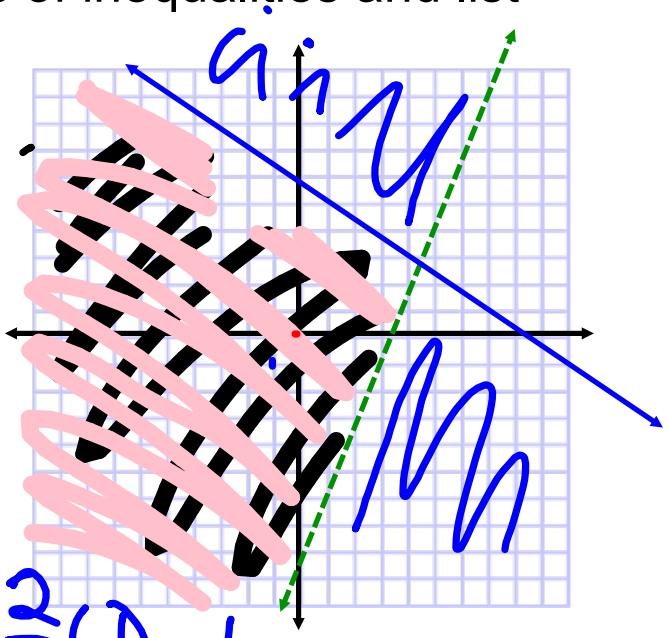
Graph the following systems of inequalities and list three possible solutions

$y > 3x - 9$

$y \leq -\frac{2}{3}x + 6$

(0, 0)

(-1, -1)



$-1 > 3(-1) - 9$

$-1 > -3 - 9$

$-1 > -12$

$-1 \leq -\frac{2}{3}(-1) + 6$

$-1 \leq \frac{2}{3} + 6$

$-1 \leq 6\frac{2}{3}$

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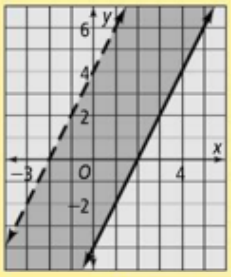
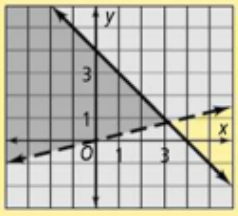
7. yes

9. no

11.



13.



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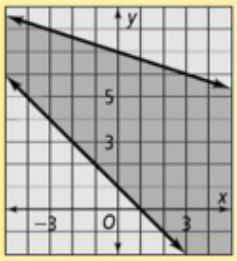
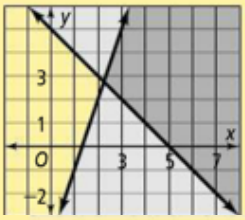


17.



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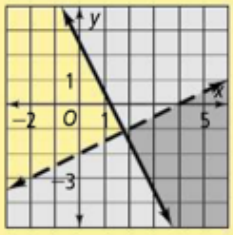
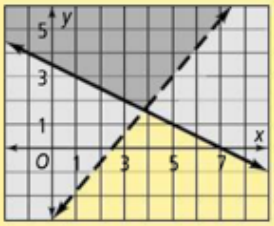


21.

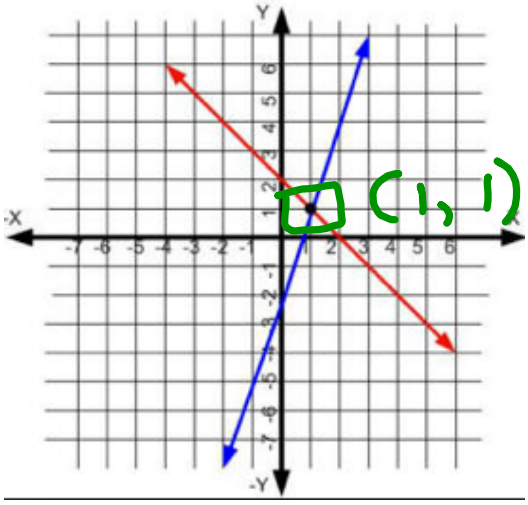


Systems of equations by graphing

System of linear equations - two or more linear equations

A solution to a system - an ordered pair that is true for all equations

When graphing systems - the point of intersection is the solution to the system



	Type of lines	Number of solutions
Different Slopes	$\not\parallel$ many	1
Same Slope and different y- intercept	$\parallel$ parallel	ϕ
Same slope and same y -intercept	Same line	infinite

$\parallel$

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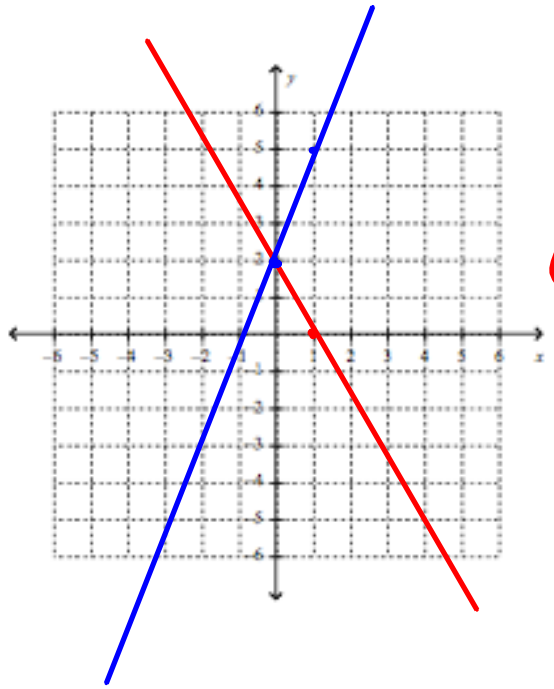

$y = -2x + 2$

$y = 3x + 2$

$(0, 2)$

$2 = -2(0) + 2$

$2 = 2$

$2 = 3(0) + 2$

$2 = 2$

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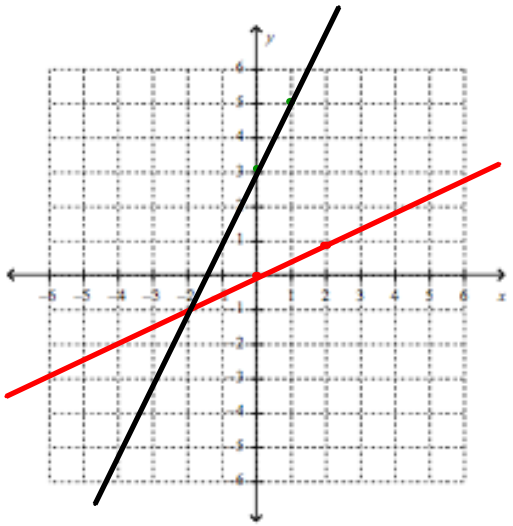

$y = 2x + 3$

$y = \frac{1}{2}x$

$(-2, -1)$

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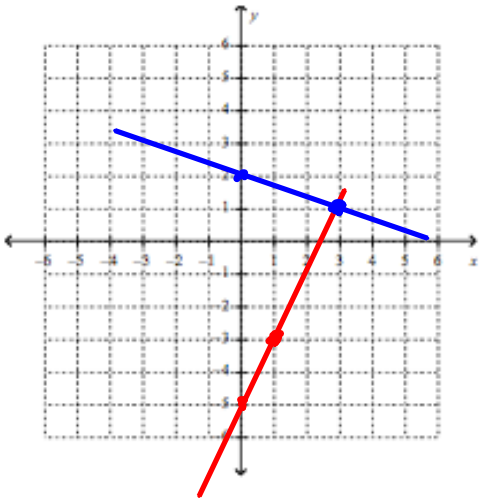

$y = 2x - 5$

$y = -\frac{1}{3}x + 2$

(3, 1)

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