Algebra 2 Name_____ ID: 1

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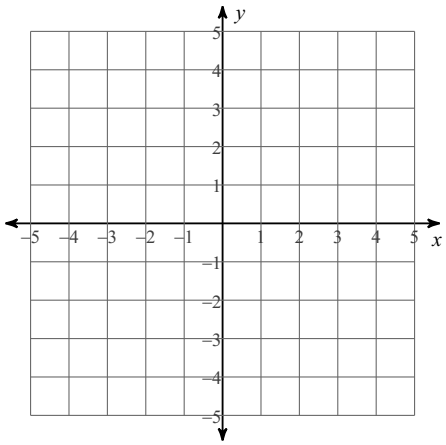
Solving systems of Equations

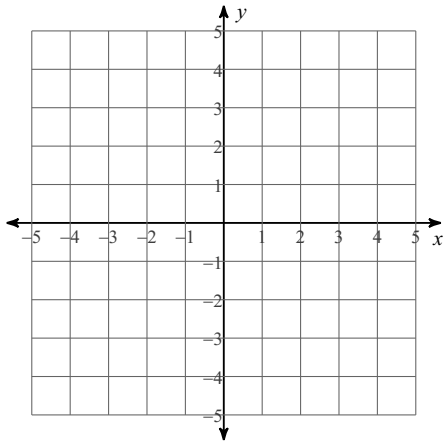
Date_____ Period____

Solve each system by graphing.

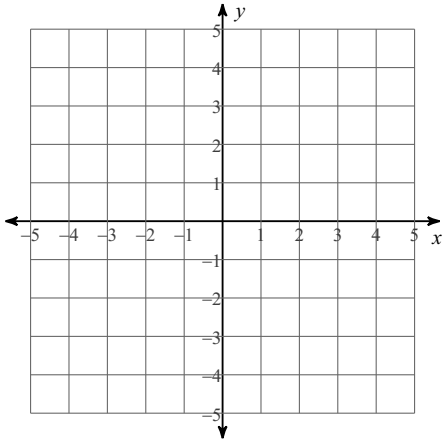
1) $y = -2x - 3$
$y = 3x + 2$



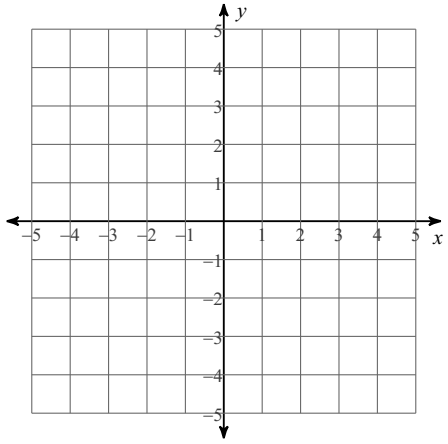
2) $y = \frac{1}{3}x - 1$
$y = \frac{4}{3}x + 2$



3) $y = \frac{5}{3}x - 1$
$y = 4$



4) $y = \frac{2}{3}x - 4$
$y = -2x + 4$



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Solve each system by substitution.

5) $x - y = 3$
$5x + 2y = -6$

6) $-3x - 9y = -39$
$x + 3y = 13$

7) $-x + y = 14$
$6x + 8y = 14$

8) $x - 3y = 1$
$6x - 4y = -22$

Solve each system by elimination.

9) $-2x + 7y = -7$
$-2x + 7y = -7$

10) $-7x - 10y = -27$
$-9x - 10y = -29$

11) $4x - 3y = -18$
$-8x - 9y = 6$

12) $-12x + 2y = -20$
$-4x + 4y = -20$

Solve each system of equations.

13) $x^2 - 3y^2 - 6x - 3y = 0$
$-2x + y + 1 = 0$

14) $-3y^2 - 2x - 44y - 128 = 0$
$x + y + 4 = 0$

15) $4x^2 + y^2 + 34x + 3y - 10 = 0$
$-2x + y - 2 = 0$

16) $-5x^2 + 2y^2 + 36x - 70 = 0$
$3x + y = 3$

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Solving systems of Equations

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Solve each system by graphing.

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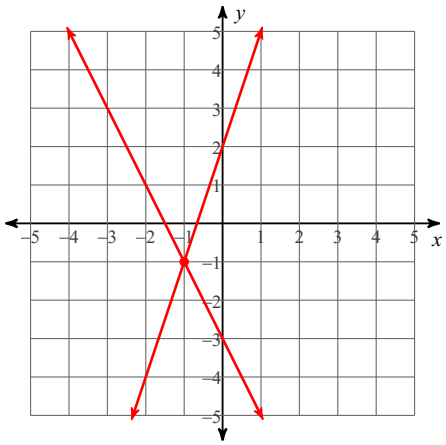
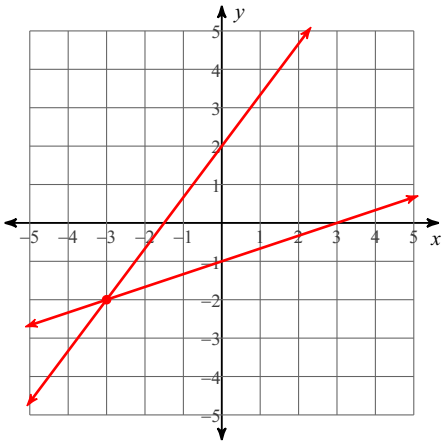


$(-1, -1)$

2) $y = \frac{1}{3}x - 1$
$y = \frac{4}{3}x + 2$



$(-3, -2)$

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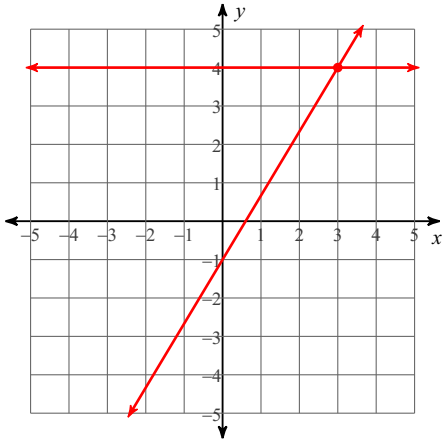
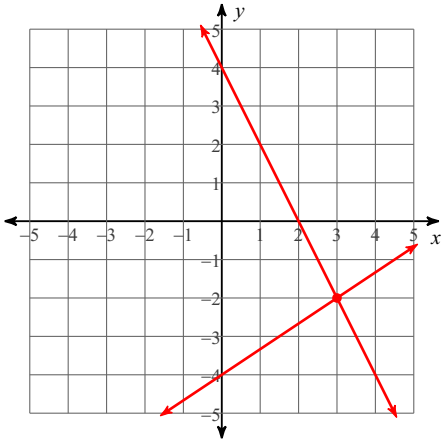


$(3, 4)$

4) $y = \frac{2}{3}x - 4$
$y = -2x + 4$



$(3, -2)$

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Solve each system by substitution.

5) $x - y = 3$
$5x + 2y = -6$

$(0, -3)$

6) $-3x - 9y = -39$
$x + 3y = 13$

Infinite number of solutions

7) $-x + y = 14$
$6x + 8y = 14$

$(-7, 7)$

8) $x - 3y = 1$
$6x - 4y = -22$

$(-5, -2)$

Solve each system by elimination.

9) $-2x + 7y = -7$
$-2x + 7y = -7$

Infinite number of solutions

10) $-7x - 10y = -27$
$-9x - 10y = -29$

$(1, 2)$

11) $4x - 3y = -18$
$-8x - 9y = 6$

$(-3, 2)$

12) $-12x + 2y = -20$
$-4x + 4y = -20$

$(1, -4)$

Solve each system of equations.

13) $x^2 - 3y^2 - 6x - 3y = 0$
$-2x + y + 1 = 0$

$(0, -1)$

14) $-3y^2 - 2x - 44y - 128 = 0$
$x + y + 4 = 0$

$(6, -10), (0, -4)$

15) $4x^2 + y^2 + 34x + 3y - 10 = 0$
$-2x + y - 2 = 0$

$(0, 2), (-6, -10)$

16) $-5x^2 + 2y^2 + 36x - 70 = 0$
$3x + y = 3$

$(-2, 9), (2, -3)$

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