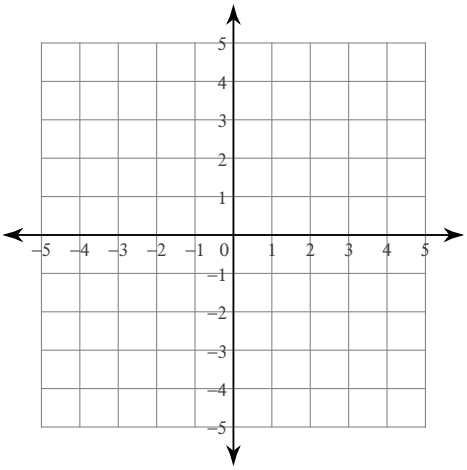
Kuta Software - Infinite Algebra 2 Name_____

Systems of Two Equations

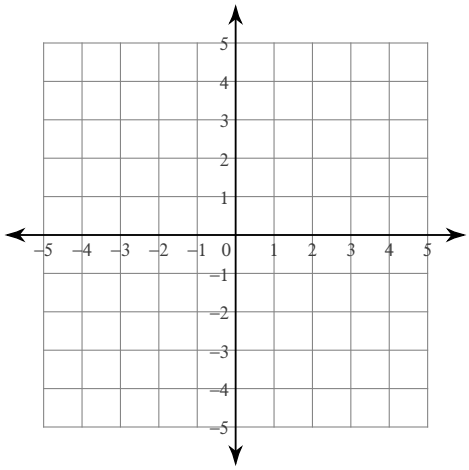
Date_____ Period____

Solve each system by graphing.

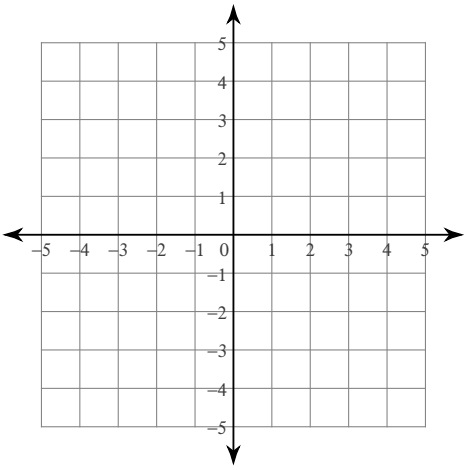
1) $y = -3x + 4$
$y = 3x - 2$



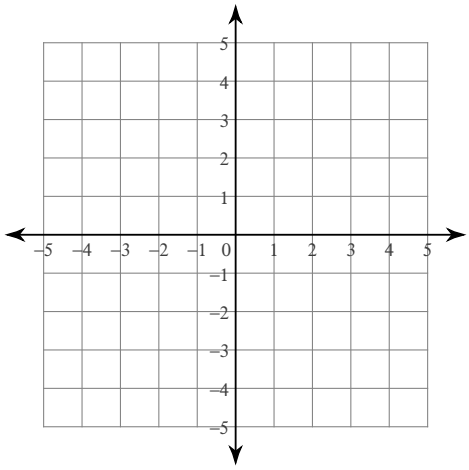
2) $y = x + 2$
$x = -3$



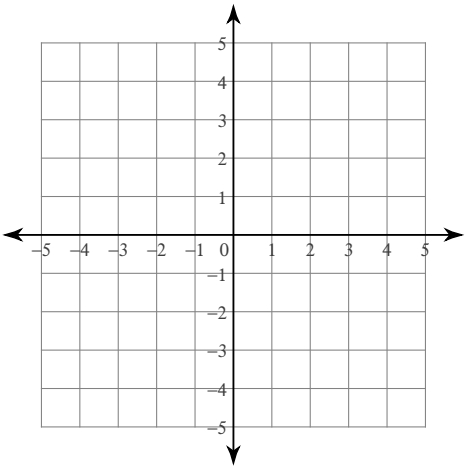
3) $x - y = 3$
$7x - y = -3$



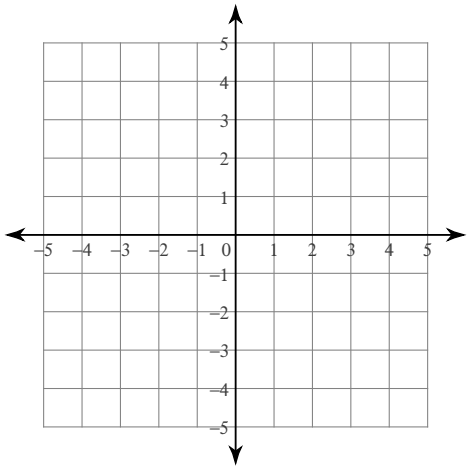
4) $4x + y = 2$
$x - y = 3$



5) $8x + y = -4$
$0 = -4 - y - 8x$



6) $2y + x + 4 = 0$
$-x = -8 - 2y$



Solve each system by substitution.

7) $y = 4x - 9$
$y = x - 3$

8) $4x + 2y = 10$
$x - y = 13$

9) $y = -5$
$5x + 4y = -20$

10) $x + 7y = 0$
$2x - 8y = 22$

11) $6x + 8y = -22$
$y = -5$

12) $7x + 2y = -6$
$-14x - 4y = -2$

13) $2x + 2y = -6$
$5x - 5y = -15$

14) $-x + 2y = -7$
$-2x - 6y = -14$

Solve each system by elimination.

15) $-x - y = 8$
$x - 3y = 8$

16) $-2x - 2y = 6$
$10x + 10y = -30$

17) $4x + 5y = -9$
$8x - y = -7$

18) $-2x + 3y = 15$
$-6x + 6y = 18$

19) $2x + 18y = 22$
$-x - 9y = -11$

20) $36 + 7x - 8y = 0$
$-10y = -12 - 6x$

21) $-x + \frac{2}{5} = -\frac{3}{5}y$
$3y = -\frac{18}{11}x + \frac{51}{11}$

22) $-17 - 5y - 11x = 0$
$-15 = 9x + 4y$

Critical thinking questions:

23) Write a system of equations with the solution $(4, -3)$.

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Systems of Two Equations

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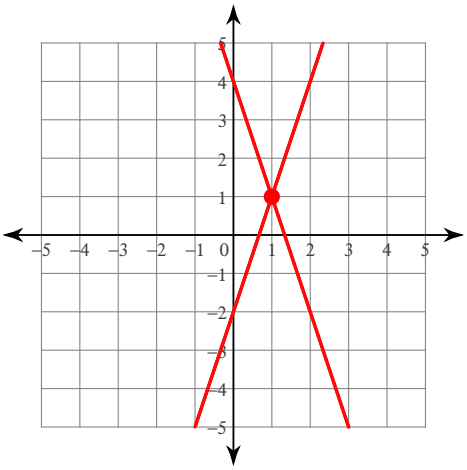
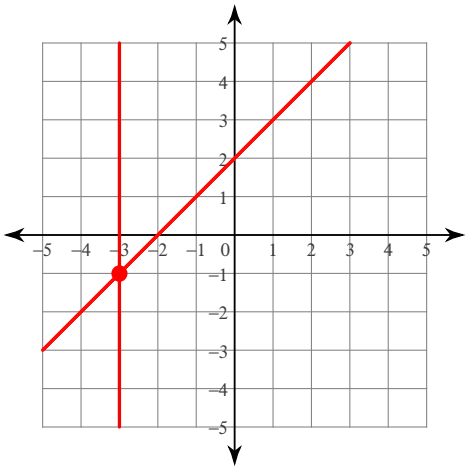
Solve each system by graphing.

1) $y = -3x + 4$
$y = 3x - 2$



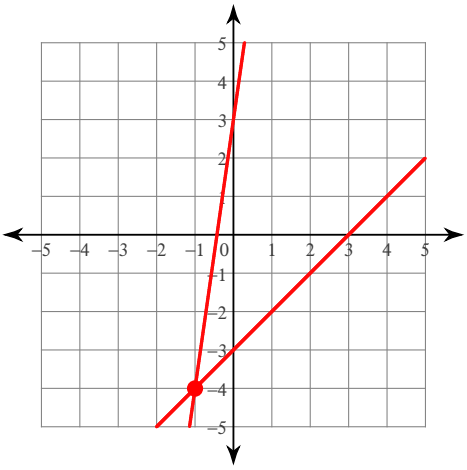
(1, 1)

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



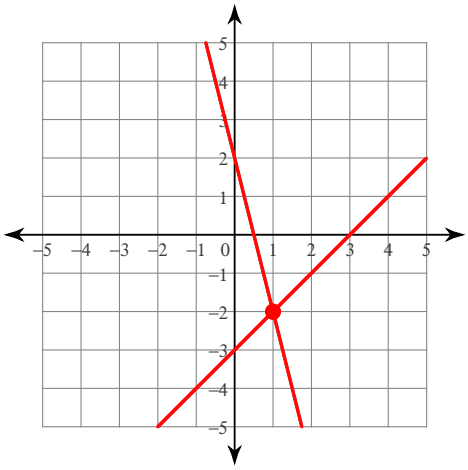
(–3, –1)

3) $x - y = 3$
$7x - y = -3$



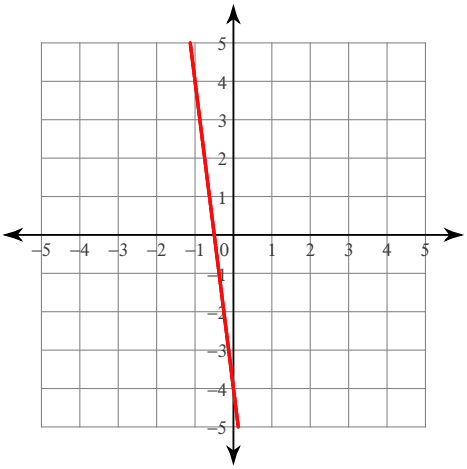
(–1, –4)

4) $4x + y = 2$
$x - y = 3$



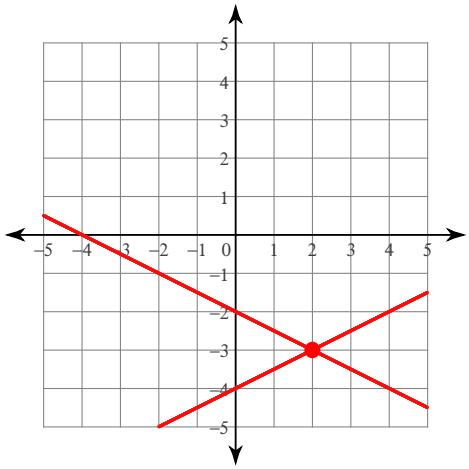
(1, –2)

5) $8x + y = -4$
$0 = -4 - y - 8x$



Infinite number of solutions

6) $2y + x + 4 = 0$
$-x = -8 - 2y$



$(2, -3)$

Solve each system by substitution.

7) $y = 4x - 9$
$y = x - 3$

$(2, -1)$

8) $4x + 2y = 10$
$x - y = 13$

$(6, -7)$

9) $y = -5$
$5x + 4y = -20$

$(0, -5)$

10) $x + 7y = 0$
$2x - 8y = 22$

$(7, -1)$

11) $6x + 8y = -22$
$y = -5$

$(3, -5)$

12) $7x + 2y = -6$
$-14x - 4y = -2$

No solution

13) $2x + 2y = -6$
$5x - 5y = -15$

$(-3, 0)$

14) $-x + 2y = -7$
$-2x - 6y = -14$

$(7, 0)$

Solve each system by elimination.

15) $-x - y = 8$
$x - 3y = 8$

$(-4, -4)$

16) $-2x - 2y = 6$
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Infinite number of solutions

17) $4x + 5y = -9$
$8x - y = -7$

$(-1, -1)$

18) $-2x + 3y = 15$
$-6x + 6y = 18$

$(6, 9)$

19) $2x + 18y = 22$
$-x - 9y = -11$

Infinite number of solutions

20) $36 + 7x - 8y = 0$
$-10y = -12 - 6x$

$(-12, -6)$

21) $-x + \frac{2}{5} = -\frac{3}{5}y$
$3y = -\frac{18}{11}x + \frac{51}{11}$

$(1, 1)$

22) $-17 - 5y - 11x = 0$
$-15 = 9x + 4y$

$(-7, 12)$

Critical thinking questions:

23) Write a system of equations with the solution $(4, -3)$.

Many answers. Ex: $x + y = 1$, $2x + y = 5$