Honors Geometry Name_____

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Chapter 13 - Solving Systems of Equations

Solve each system by elimination.

1) $-6x + 20y = 16$
$x + 10y = 24$

2) $-9x - 12y = -30$
$-6x - 6y = -6$

3) $12x + 2y = -30$
$6x + 3y = -9$

4) $-3x - 8y = 9$
$-10x - 16y = -2$

5) $-60x - 70y = 0$
$36x + 42y = 0$

6) $2x + 6y = 10$
$3x - 10y = 15$

7) $-7x - 10y = -8$
$3x + 9y = -6$

8) $-7x + 21y = -11$
$-4x + 12y = -4$

9) $63x + 81y = -17$
$-42x - 54y = 18$

10) $9x - 2y = -11$
$4x - 5y = -9$

Solve each system by substitution.

11) $y = -4x - 11$
$y = -2x - 9$

12) $y = -2x - 8$
$y = 8x + 2$

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13) $y = -5x + 12$
$-4x + 4y = -24$

14) $y = 7x + 1$
$-6x - y = -14$

15) $3x + 2y = -1$
$x - 7y = 15$

16) $-5x + 6y = 19$
$x - 5y = 0$

17) $8x + y = 21$
$-x - 5y = 12$

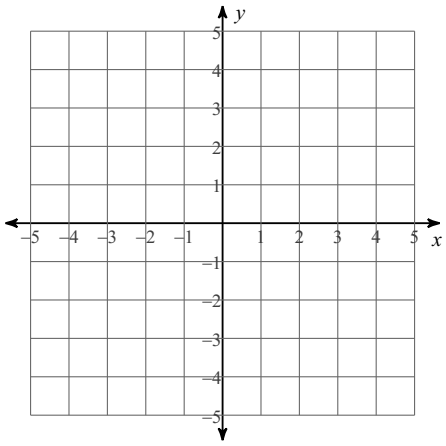
18) $x + 4y = -19$
$-5x + 4y = 23$

19) $-8x - 3y = 0$
$x + y = -5$

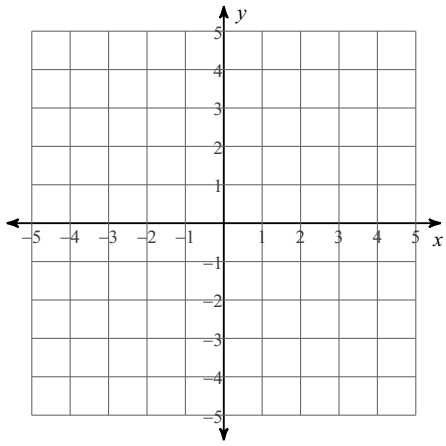
20) $-2x - 2y = 16$
$x + 3y = -24$

Solve each system by graphing.

21) $y = \frac{1}{3}x + 4$
$y = -\frac{7}{3}x - 4$



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



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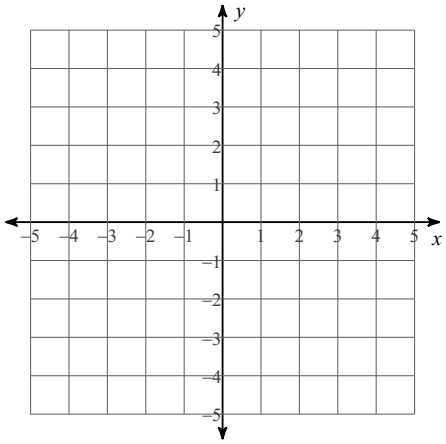
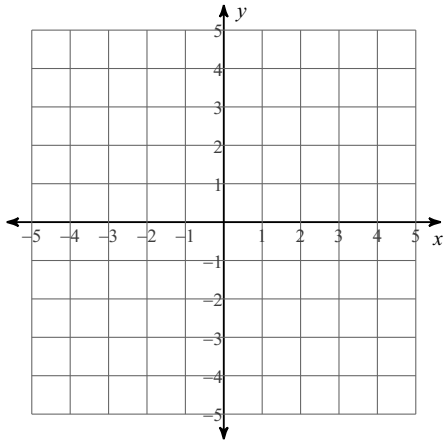
23) $y = \frac{5}{2}x + 2$

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



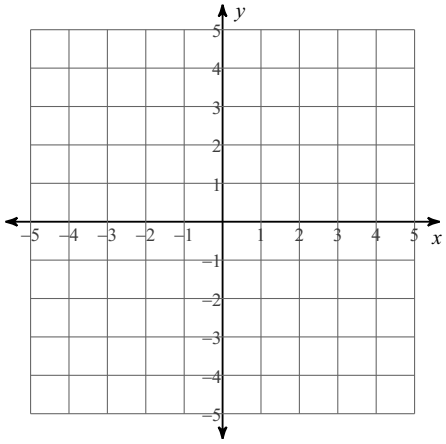
24) $y = -\frac{5}{3}x + 1$

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



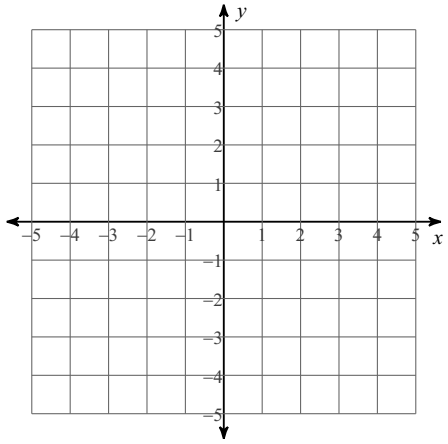
25) $x + y = 3$

$4x - y = 2$



26) $6x + y = -2$

$6x + y = 1$



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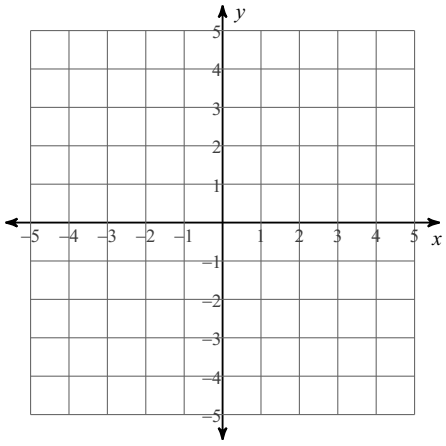
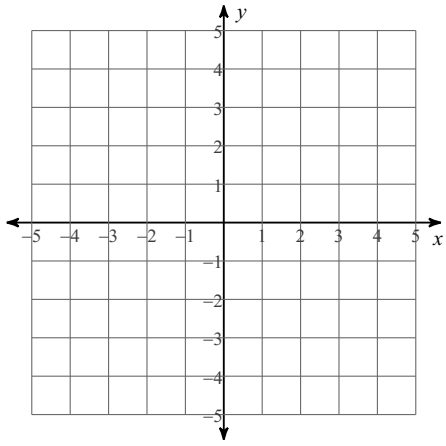
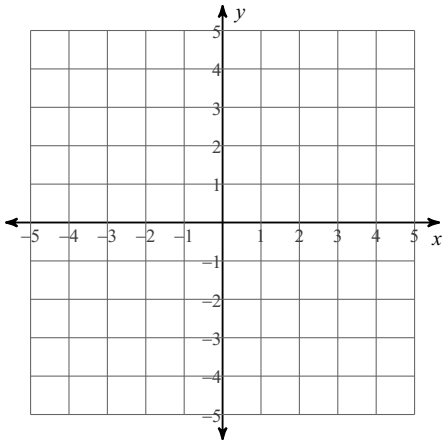
27) $5x - 4y = -16$
$x + 4y = -8$



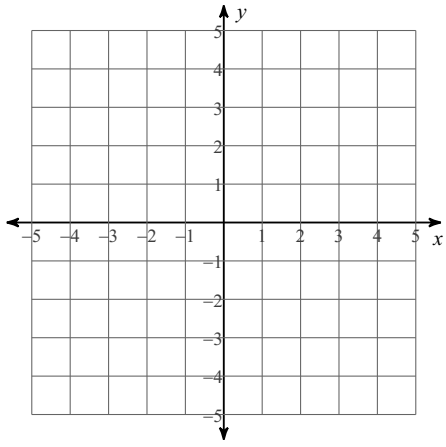
28) $x + 4y = -12$
$2x + y = 4$



29) $0 = 2 + \frac{1}{2}y$
$16x - 8 = -2y$



30) $0 = y - 2x - 2$
$-3 - y = -\frac{1}{3}x$



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Chapter 13 - Solving Systems of Equations

Solve each system by elimination.

1) $-6x + 20y = 16$
$x + 10y = 24$

$(4, 2)$

2) $-9x - 12y = -30$
$-6x - 6y = -6$

$(-6, 7)$

3) $12x + 2y = -30$
$6x + 3y = -9$

$(-3, 3)$

4) $-3x - 8y = 9$
$-10x - 16y = -2$

$(5, -3)$

5) $-60x - 70y = 0$
$36x + 42y = 0$

Infinite number of solutions

6) $2x + 6y = 10$
$3x - 10y = 15$

$(5, 0)$

7) $-7x - 10y = -8$
$3x + 9y = -6$

$(4, -2)$

8) $-7x + 21y = -11$
$-4x + 12y = -4$

No solution

9) $63x + 81y = -17$
$-42x - 54y = 18$

No solution

10) $9x - 2y = -11$
$4x - 5y = -9$

$(-1, 1)$

Solve each system by substitution.

11) $y = -4x - 11$
$y = -2x - 9$

$(-1, -7)$

12) $y = -2x - 8$
$y = 8x + 2$

$(-1, -6)$

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13) $y = -5x + 12$
$-4x + 4y = -24$

$(3, -3)$

14) $y = 7x + 1$
$-6x - y = -14$

$(1, 8)$

15) $3x + 2y = -1$
$x - 7y = 15$

$(1, -2)$

16) $-5x + 6y = 19$
$x - 5y = 0$

$(-5, -1)$

17) $8x + y = 21$
$-x - 5y = 12$

$(3, -3)$

18) $x + 4y = -19$
$-5x + 4y = 23$

$(-7, -3)$

19) $-8x - 3y = 0$
$x + y = -5$

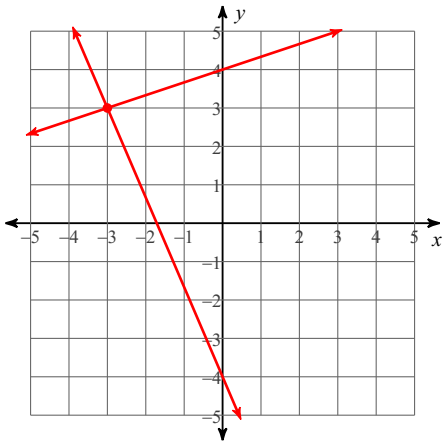
$(3, -8)$

20) $-2x - 2y = 16$
$x + 3y = -24$

$(0, -8)$

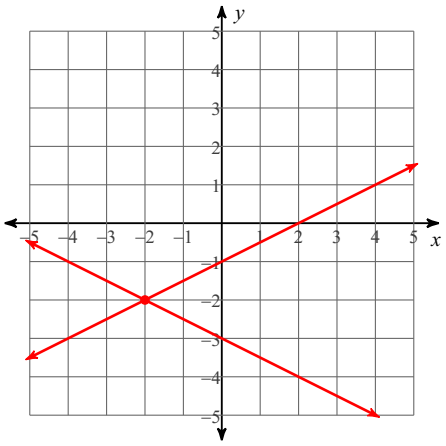
Solve each system by graphing.

21) $y = \frac{1}{3}x + 4$
$y = -\frac{7}{3}x - 4$



$(-3, 3)$

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



$(-2, -2)$

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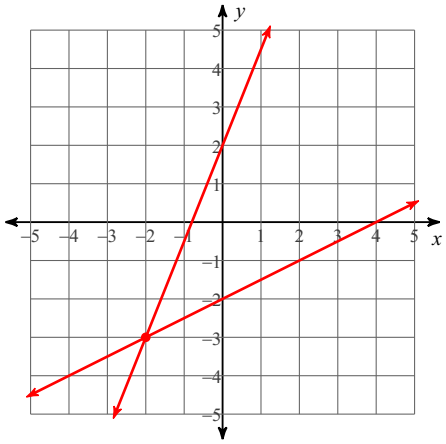
23) $y = \frac{5}{2}x + 2$

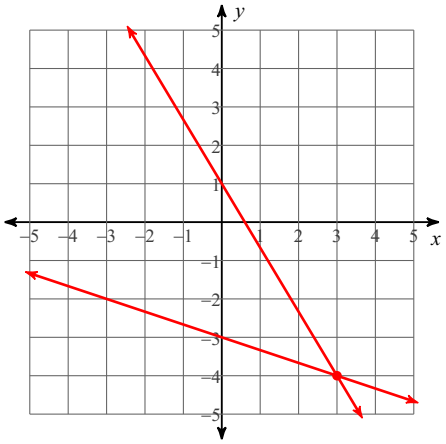
$y = \frac{1}{2}x - 2$



$(-2, -3)$

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

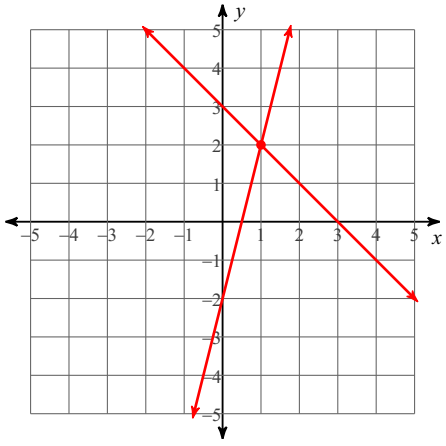
$y = -\frac{1}{3}x - 3$



$(3, -4)$

25) $x + y = 3$

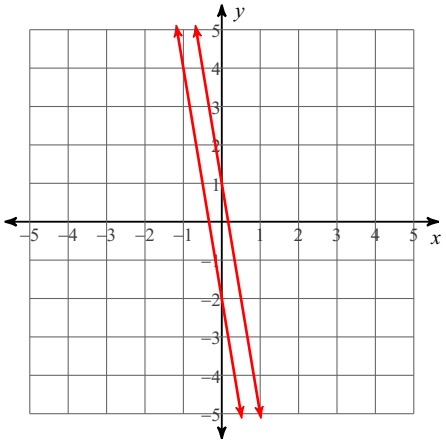
$4x - y = 2$



$(1, 2)$

26) $6x + y = -2$

$6x + y = 1$



No solution

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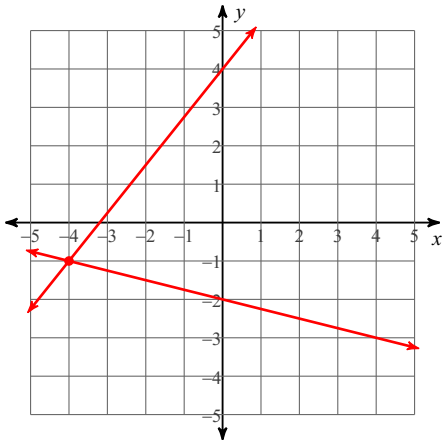
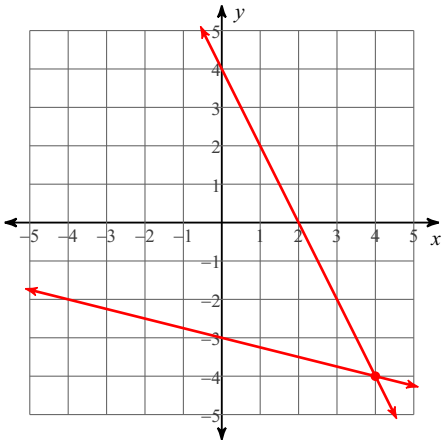
27) $5x - 4y = -16$
$x + 4y = -8$



$(-4, -1)$

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



$(4, -4)$

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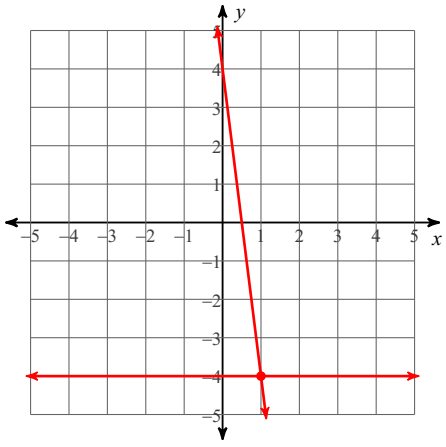
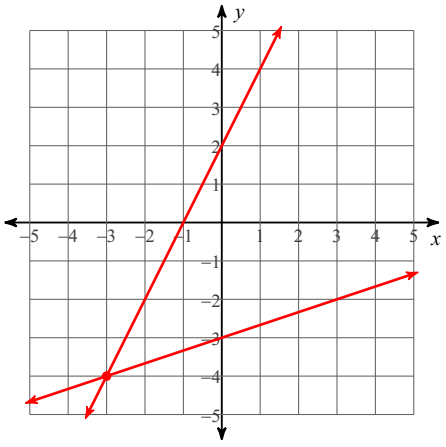


$(1, -4)$

30) $0 = y - 2x - 2$
$-3 - y = -\frac{1}{3}x$



$(-3, -4)$

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