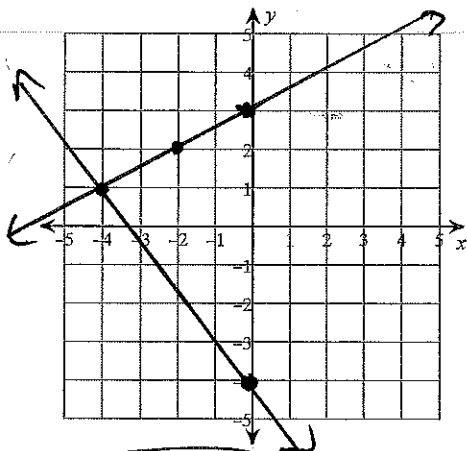# A3 Review

Solve each system by graphing.
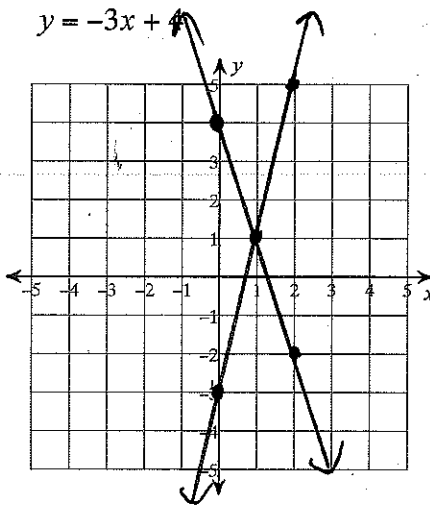
1) $y = -\frac{5}{4}x - 4$

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

$(-4, 1)$

2) $y = 4x - 3$

$y = -3x + 4$

$(1, 1)$

Solve each system by substitution.

3) $-3x - 2y = -1$
$y = 3x - 13$

$-3x - 2(3x - 13) = -1$

$-3x - 6x + 26 = -1$

$-9x = -27$

$x = 3$

$y = 3 \cdot 3 - 13$
$y = 9 - 13$
$y = -4$

$(3, -4)$

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

$2x - (2x + 8) = -6$

$2x - 2x - 8 = -6$

$-8 = -6$ ✗

No Solution

5) $-2x + 2y = -12$
   $-3x + y = -6$

$y = 3x - 6$ $y = 3(0) - 6$
$-2x + 2(3x-6) = -12$ $y = -6$
$-2x + 6x - 12 = -12$
$4x = 0$ $\boxed{(0, -6)}$
$x = 0$

6) $-6x + 2y = 38$
   $-3x + y = 19 + 3x$

$-6x + 2(19 + 3x) = 38$
$-6x + 38 + 6x = 38$
$38 = 38$

$\boxed{\text{INFINITE SOLUTIONS}}$

Solve each system by elimination.

7) $4x + 3y = -8$
   $-4x + 3y = -16$

$6y = -24$
$y = -4$
$4x + 3(-3) = -8$ $\boxed{(1, -4)}$
$4x - 12 = -8$
$4x = 4$
$x = 1$

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

$-2y = -4$
$y = 2$
$2x + 4(2) = -2$ $\boxed{(-5, 2)}$
$2x + 8 = -2$
$2x = -10$
$x = -5$

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

$-6y = -6$
$y = 1$
$3x - 2(1) = -2$ $\boxed{(0, 1)}$
$3x - 2 = -2$
$3x = 0$
$x = 0$

10) $2x + y = 0$
    $-6x + y = +8$

$-4x = 8$
$x = -2$
$2(-2) + y = 0$ $\boxed{(-2, 4)}$
$-4 + y = 0$
$y = 4$

11) $6(6x - 3y = 18)$
    $6(5x - 5y = 15)$

$30x - 15y = 90$
$-30x + 3oy = -90$
_____
$15y = 0$
$y = 0$

$30x - 15(0) = 90$
$30x = 90$ $\boxed{(3, 0)}$
$x = 3$

12) $2(-5x - 3y = 14)$ $-10x - 6y = 28$
    $5(2x - 2y = -12)$ $10x - 10y = -60$
                        _____
                         $-16y = 32$
                         $y = -2$
$-10x - 6(-2) = 28$
$-10x + 12 = 28$
$-10x = 40$ $\boxed{(-4, 2)}$
$x = -4$

-2-