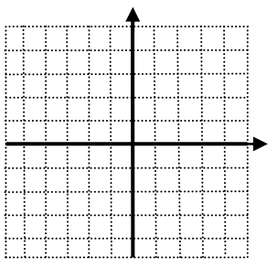
MFM 2P1 Name:_____

Linear Systems Review

1. Solve the linear system by **graphing**. Show a check for your solution in (b).

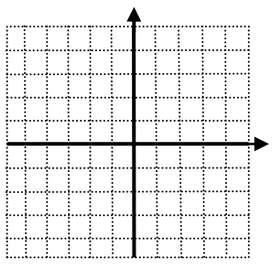
a) $y = \frac{-1}{2}x + 1$

$y = 2x - 4$



b) $2x + y = 4$

$3x - 2y = 6$



2. Solve the linear system of equations by **comparison**.

a) $y = -x + 6$

$y = x - 2$

b) $x = y - 5$

$x = 1 - 2y$

3. Solve the linear system of equations by **substitution**.

a) $y = 3x - 2$

$5x + 3y = 14$

b) $y = 2x + 3$

$3x - 5y = -8$

4. Solve the linear system by **elimination**.

a) $10x - 2y = 16$

$3x + 2y = 10$

b) $2x - y = -2$

$x + 2y = 9$

5. Solve the linear system by **any method you choose**.

a) $4x - 7y = 20$
$x - 3y = 10$

b) $3x + 2y = 18$
$x = 4y - 8$

WORD PROBLEMS

6. Tickets for a play cost \$5 for adults and \$3 for children. A total of 800 tickets are sold and the total sales are \$3600. How many of each type of tickets were sold?

$$5x + 3y = 3600$$
$$x + y = 800$$

x =

y =

7. A house contractor needs shingles to build a new roof. He wants to hire the company that will give him the lowest price. The two options are shown below:

Everyday Roofing: charges a base rate of \$80 plus \$2 per shingle
Quality Concrete: charges a base rate of \$60 plus \$3 per shingle

$$y = 80 + 2x$$
$$y = 60 + 3x$$

x =

y =

8. At a restaurant the cost for a breakfast taco and a small glass of milk is \$2.10. The cost for 2 tacos and 3 small glasses of milk is \$5.15. Determine the cost of each item.

$$x + y = 2.10$$
$$2x + 3y = 5.15$$

x =

y =