Math 10 Name:_____
Chapter 7 Review Block:_____

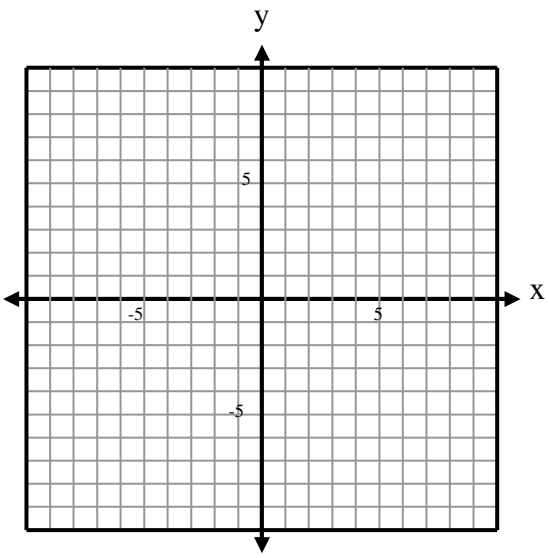
1. Create a linear system to model each of the following situations. Do not solve.

   a) The smaller of two numbers is 3 less than the larger number. The sum of the numbers is 45.

   b) The perimeter of a rectangle is 120 cm. The length is double the width.

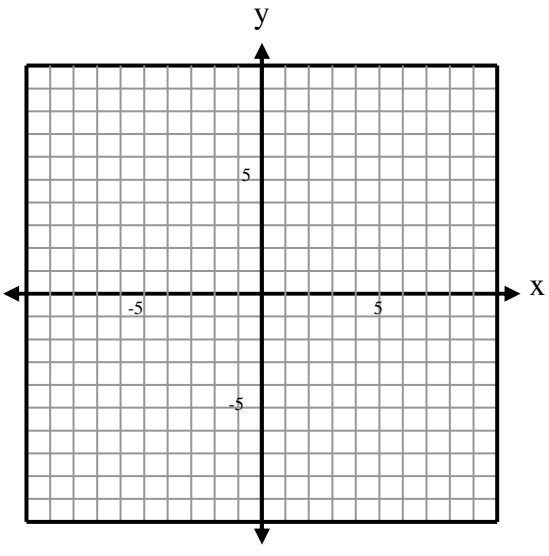
2. Solve each of the following systems by graphing:

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



   Solution:_____

   b) $x + 2y = -4$
   $4y - 3x = 12$



   Solution:_____ /8

3. Solve each of the following systems of equations by substitution.

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

_____

b) $x + y = 7$
$2x - y = 5$

_____

4. Solve each of the following systems of equations by elimination.

a) $3x + 5y = 12$
$7x + 5y = 8$

_____
/6

b) $2x + 8y = 8$
$-2x + y = 10$

_____

c) $5x + 2y = 5$
$3x - 4y = -23$

_____

d) $5x + 8y = -2$
$4x + 6y = -2$

_____
/6

5. Determine the number of solutions to each of the following systems of equations.

a) $2x + y = 5$
$4x + 2y = 6$

_____

b) $x + y = 3$
$4x + 4y = 12$

_____

c) $2x + y = 10$
$x + y = 3$

_____

6. Given the equation y=-3x + 1, write a second equation to form a system with

a) no solution _____

b) infinitely many solutions _____

/5