Algebra I

Notes Section 6.1
Solve Linear Systems by Graphing

Big Ideas

1. How to find the solution of a linear system by graphing both equations using slope & y-intercept or by finding their intercepts.
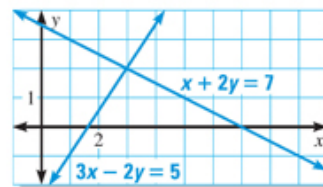
VOCABULARY

System of Linear Equations: _____

_____

Solution of a System of Linear Equations: _____

_____

Consistent Independent System: _____

_____

EXAMPLE 1   Use the graph to solve the system.
Then check your answer.

$x + 2y = 7$

$3x - 2y = 5$

EXAMPLE 2   Solve the linear system.
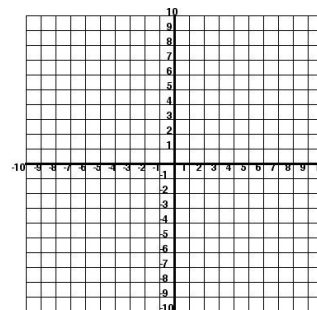
a) $-x + y = -7$
    $x + 4y = -8$

STEPS

1. Find the x & y-intercept, then graph.
   OR
   Solve the equation for y= and identify the slope and y-intercept.

2. Identify the solution.

b) $x - y = 5$
$\quad\;\; 3x + y = 3$
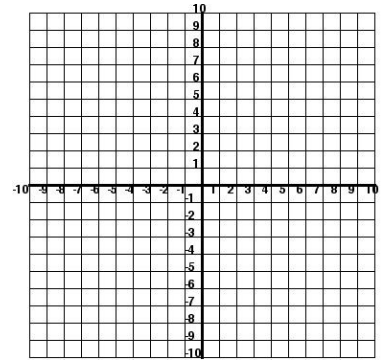
EXAMPLE 3 The parks and recreation department in your town offers a season pass for $90. As a season pass holder, you pay $4 per session to use the town's tennis courts. Without the season pass, you pay $13 per session to use the tennis courts. **Write a system of equations.**

EXAMPLE 4 **Graph the system.**

$x + y = 25$
$15x + 30y = 450$