Name key Date Hour

Section 3.1 – Solving Systems of Equations by Graphing

Alg 2 Trig G notes

System of equations – 2 or more equations in the same variable form

Ex: $x + 3y = 7$
$5x - 4y = 9$
→ LINEAR SYSTEM

Solution – intersection point

Determine whether the ordered pair is a solution to the system of equation.

1)
$x + y = 9$
$3x - y = 11$
(5, 4)
YES

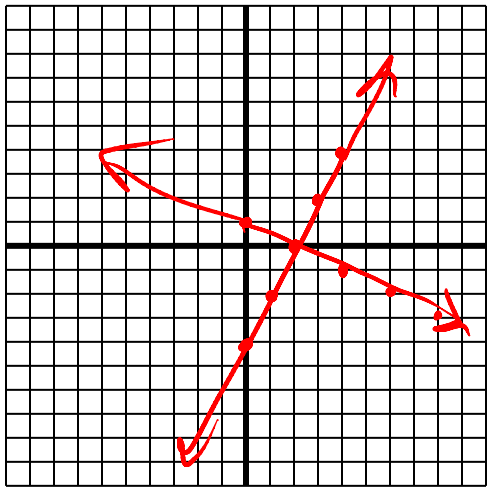
$5+4=9$
$9=9$ ✱
$15-4=11$
$11=11$ ✱

2)
$2x - 2y = -4$
$-x - y = 1$
(2, 4)
NO

$4-8=-4$ ✱
$-4=-4$
$-2-4=1$
$-6 \neq 1$ ☹

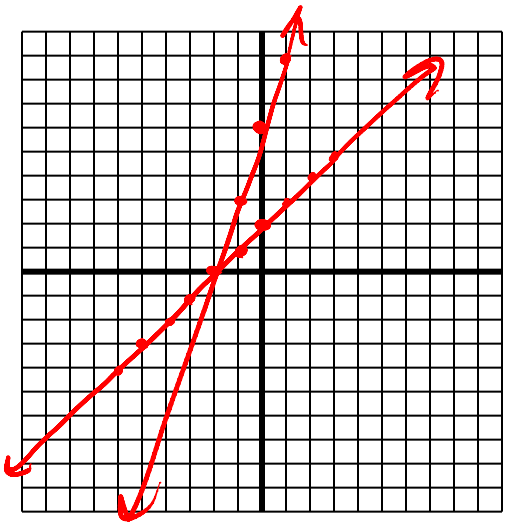
Graph each equation to estimate the solution to the system of equation.

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



(2,0)

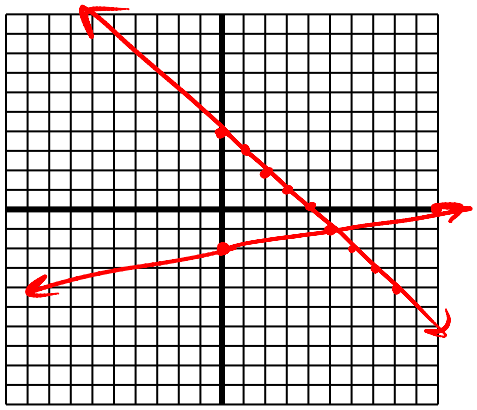
4) $y = 3x + 6$
$-2 + y = x$
$y = x + 2$



(-2,0)

5) $y = -x + 4$

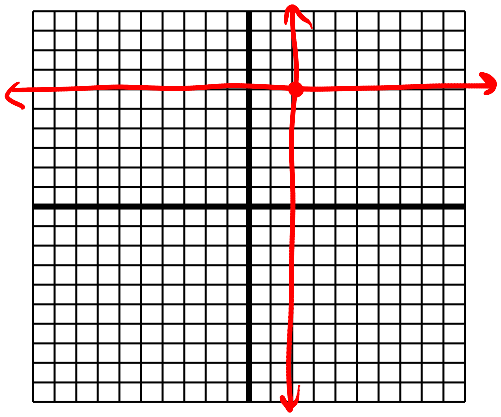
$y = \frac{1}{5}x - 2$



(5, -1)

6) $y = 6$

$x = 2$



(2, 6)

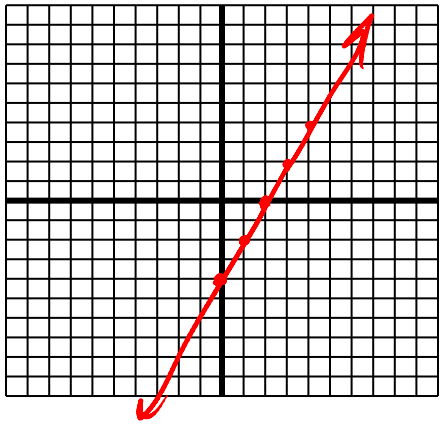
7) $2y = 4x - 8$

$3y = 6x - 12$

$y = 2x - 4$

$y = 2x - 4$

same line



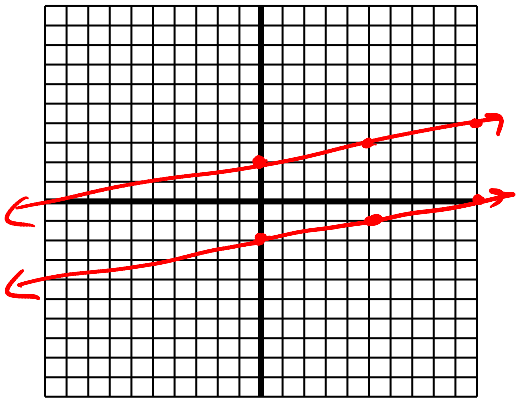
infinitely many solutions

8) $5y = x + 10$

$y = \frac{1}{5}x - 2$

$y = \frac{1}{5}x + 2$

parallel lines



no solution