

SYSTEMS OF EQUATIONS



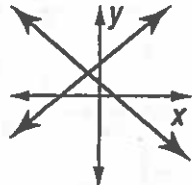
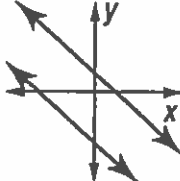
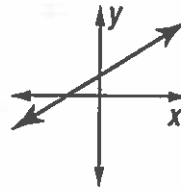
What is a "system" of equations?

set of equations that you use at once



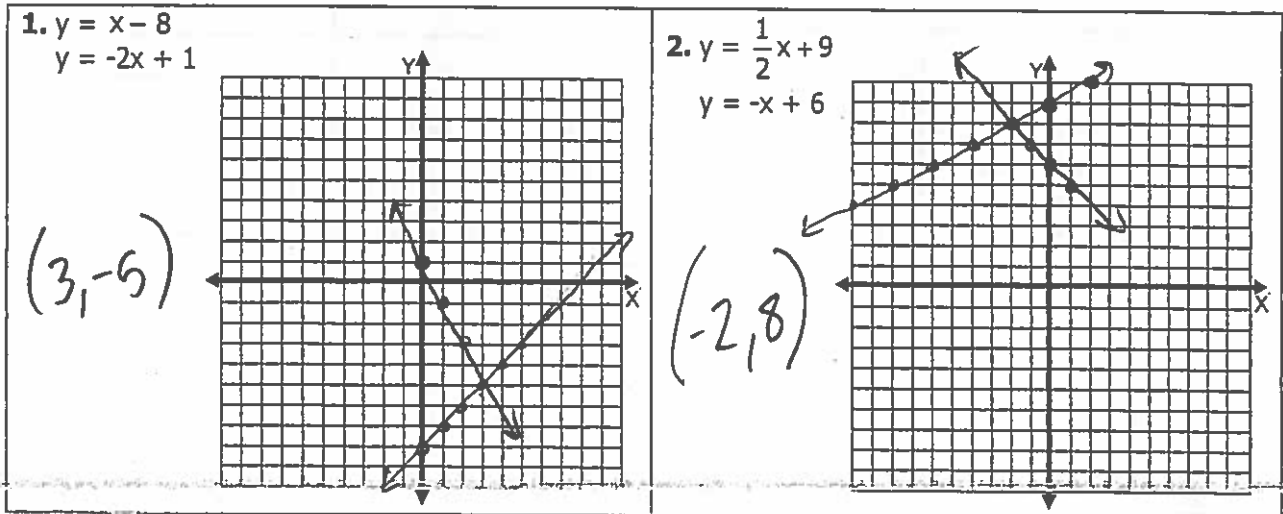
What is the solution to a system of equations?

the intersection of the lines

TYPES OF SOLUTIONS:		
<p>One Solution</p>  <p>This is created by INTERSECTING LINES!</p>	<p>No Solution</p>  <p>This is created by PARALLEL LINES!</p>	<p>Infinite Solutions</p>  <p>This is created by IDENTICAL LINES!</p>

Solving by Graphing

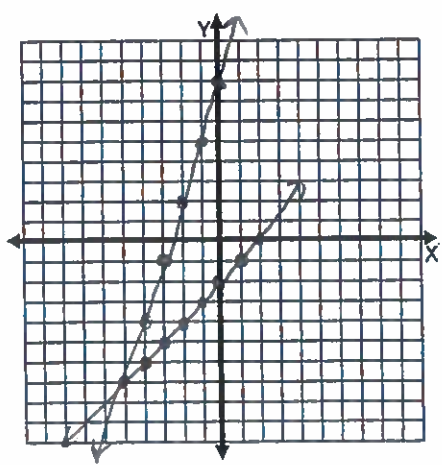
Note: Make sure equations are in slope-intercept form!



3. $-3x + y = 8$
 $-x + y = -2$

$y = 3x + 8$
 $y = x - 2$

$(-5, -7)$

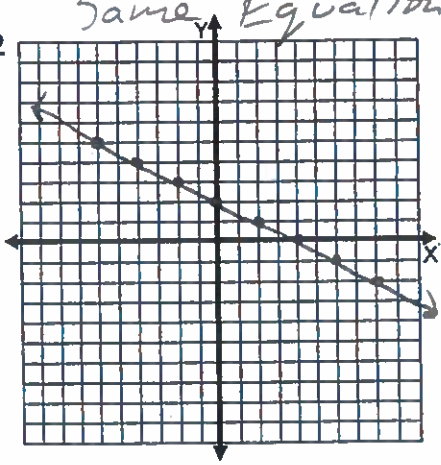


4. $x + 2y = 4$
 $y = -\frac{1}{2}x + 2$

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

IMS

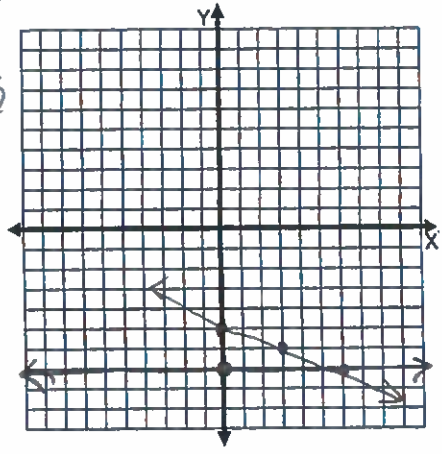
Same Equation



5. $x + 3y = -15$
 $y = -7$

$\frac{3y}{3} = \frac{-x - 15}{3} \frac{1}{3}$
 $y = -\frac{1}{3}x - 5$

$(6, -7)$

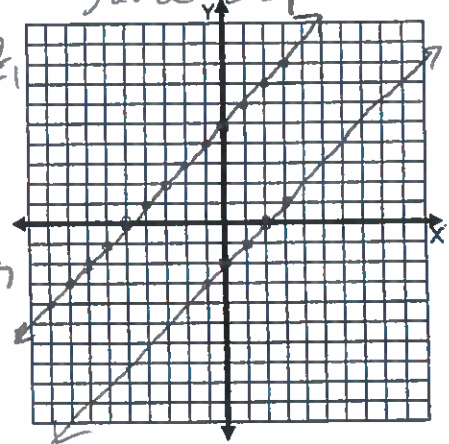


6. $y = x + 5$
 $x - y = 2$

$-y = -x + 2$
 $y = x - 2$

No Solutions

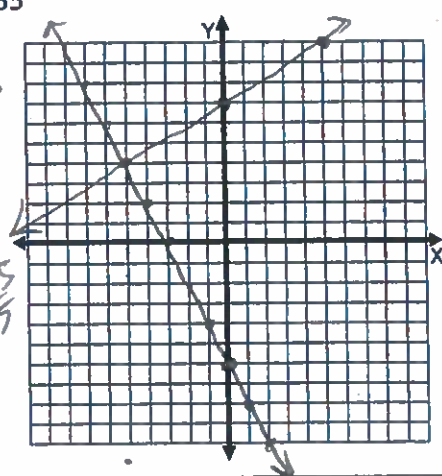
Same Slope



7. $3x - 5y = -35$
 $2x + y = -6$
 $y = -2x - 6$

$3x - 5y = -35$
 $3x \quad -3x$
 \hline
 $-5y = -3x - 35$
 $\frac{-5y}{-5} = \frac{-3x - 35}{-5} \frac{1}{-5}$
 $y = \frac{3}{5}x + 7$

$(-5, 4)$



8. $x = -2$
 $3x - 2y = -18$
 $-2y = -3x - 18$
 $\frac{-2y}{-2} = \frac{-3x - 18}{-2} \frac{1}{-2}$
 $y = \frac{3}{2}x + 9$

$(-2, 6)$

