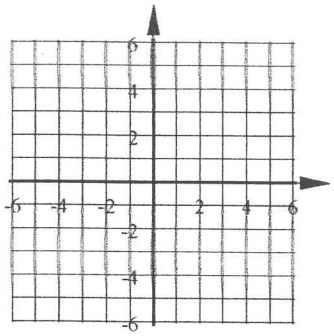
Algebra 1 Bellwork Monday, January 5, 2015

1. Find the solution to this system of equations by graphing. $y = 2x + 3$ $3x - 9y = 18$



For 2 to 5, find the slope and y-intercept of each pair of lines then tell if the system of equations has ONE SOLUTION, NO SOLUTION, or MANY SOLUTIONS.

2. $y = 8x + 7$
   $8x - 2y = 14$

3. $y = -6x + 5$
   $18x + 3y = 15$

4. $y = 2x + 7$
   $y + 1 = 2(x - 3)$

5. $y = 4x + 7$
   $y = -\frac{1}{4}x + 9$

6. You are trying to decide between two health clubs to join. One club charges a $98 initiation fee then $12 per month. The other club charges a $50 initiation fee then $15 per month. After how many months will the total charges for the two clubs be the same?

ANSWERS

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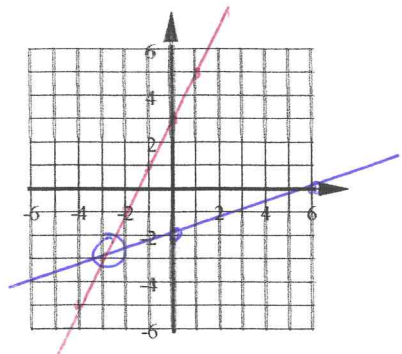

Sol
$(-3, -3)$

X-INT $= 18/3 = 6$
Y-INT $= 18/-9 = -2$

For 2 to 5, find the slope and y-intercept of each pair of lines then tell if the system of equations has ONE SOLUTION, NO SOLUTION, or MANY SOLUTIONS.

2. $y = 8x + 7$
   $8x - 2y = 14$ — ONE SOL
   $y = \frac{14 - 8x}{-2} = -7 + 4x$

3. $y = -6x + 5$
   $18x + 3y = 15$ — MANY SOL
   $y = \frac{15 - 18x}{3} = 5 - 6x$

4. $y = 2x + 7$
   $y + 1 = 2(x - 3)$ — NO SOL
   $y = 2x - 7$

5. $y = 4x + 7$
   $y = -\frac{1}{4}x + 9$ — ONE SOL

6. You are trying to decide between two health clubs to join. One club charges a $98 initiation fee then $12 per month. The other club charges a $50 initiation fee then $15 per month. After how many months will the total charges for the two clubs be the same?

$T = 98 + 12m$
$T = 50 + 15m$

16 months