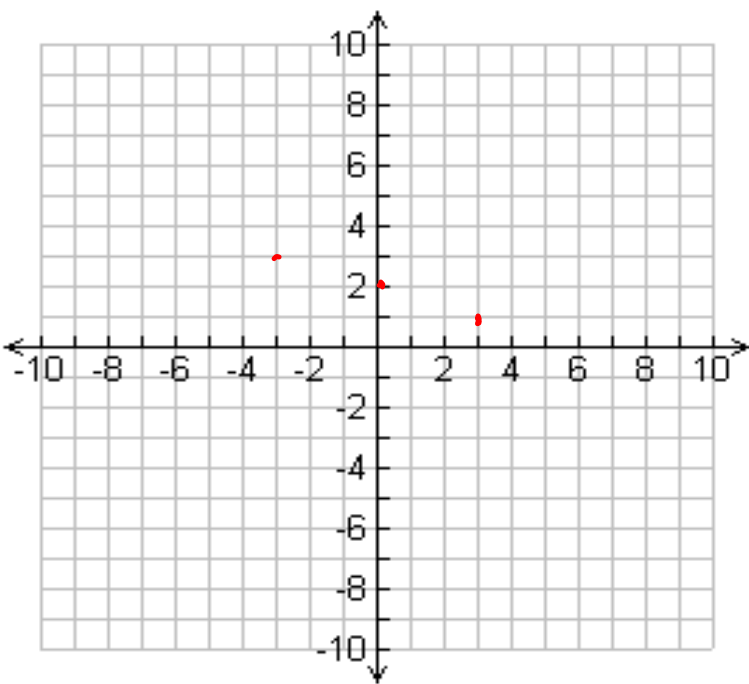


MATH MINUTE

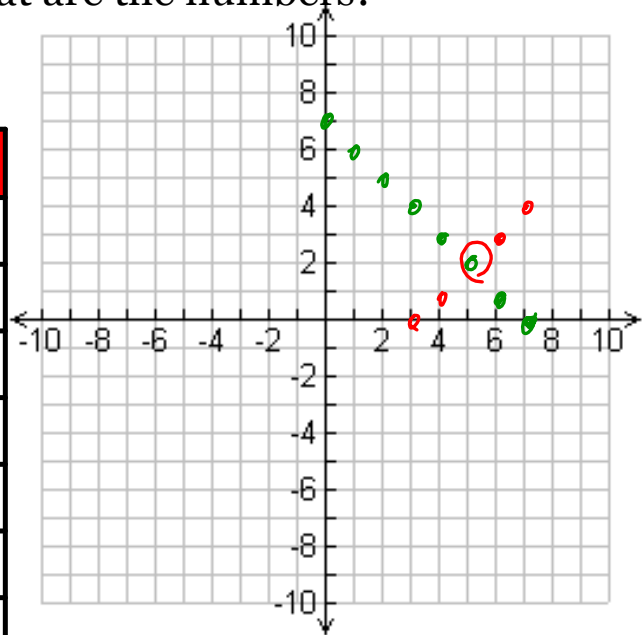
Graph

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

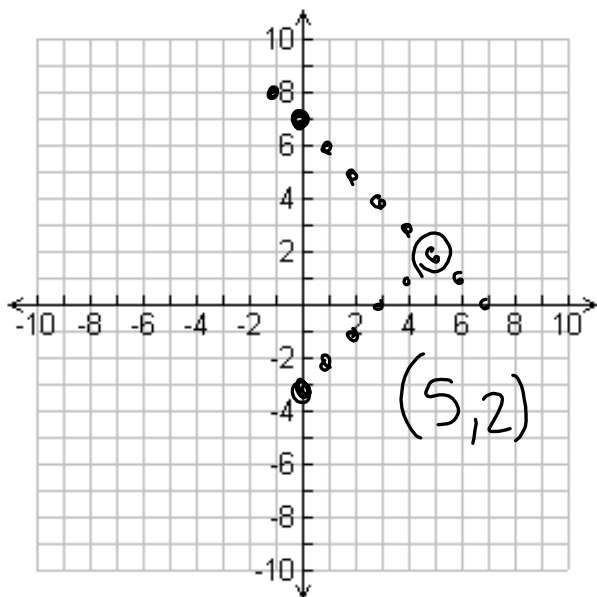


I'm thinking of two numbers whose sum is 7 and whose difference is 3. What are the numbers?

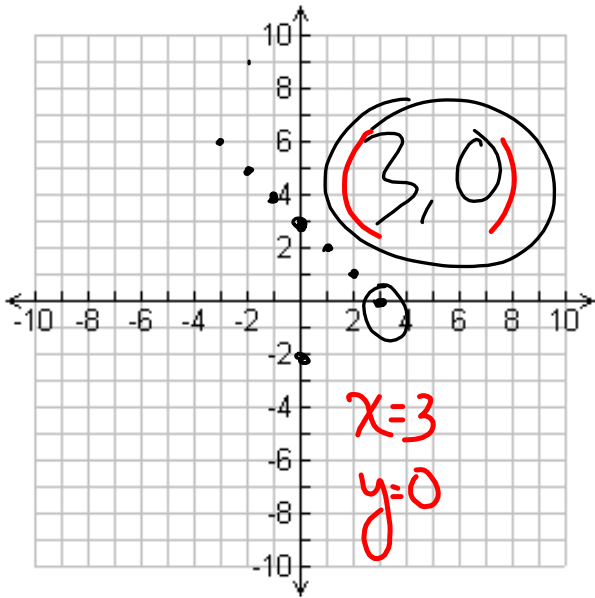
Sum		Difference	
<i>f</i>	<i>s</i>	<i>f</i>	<i>s</i>
7	0	7	4
6	1	6	3
5	2	5	2
4	3	4	1
3	4	3	0
2	5		
1	6		



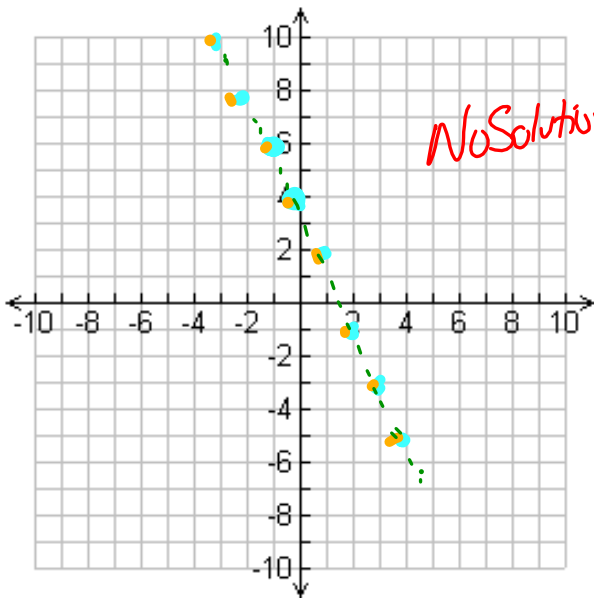
I'm thinking of two numbers whose sum is 7 and whose difference is 3. What are the numbers?



$$\begin{array}{r}
 x + y = 7 \quad E_1 \\
 \underline{-x} \qquad \qquad \underline{-x} \\
 y = -x + 7 \\
 x - y = 3 \quad E_2 \\
 \underline{-x} \qquad \qquad \underline{-x} \\
 -y = -x + 3 \\
 \frac{-y}{-1} = \frac{-x + 3}{-1} \\
 y = x - 3
 \end{array}$$



$$\begin{array}{r}
 4x + 6y = 12 \\
 \begin{array}{r}
 \underline{-4x} \\
 2x + 2y = 6 \\
 \underline{-2x} \quad \underline{-2y} \quad \underline{-6y + \frac{-4x}{-6} + 12} \\
 \hline
 \frac{2y}{2} = \frac{-2x}{2} + \frac{6}{2} \quad y + \frac{4}{6}x + 2 \\
 y = -x + 3 \quad \frac{2}{3}x
 \end{array}
 \end{array}$$



$$2x + y = 4$$

$$-3y = 6x + 15$$

$$\begin{array}{r} 2x + y = 4 \\ -2x \quad -2x \\ \hline y = -2x + 4 \end{array}$$

$$\begin{array}{r} -3y = 6x + 15 \\ -3 \quad -3 \quad -3 \\ \hline y = -2x - 5 \end{array}$$

Same slopes but different.
Lines parallel.

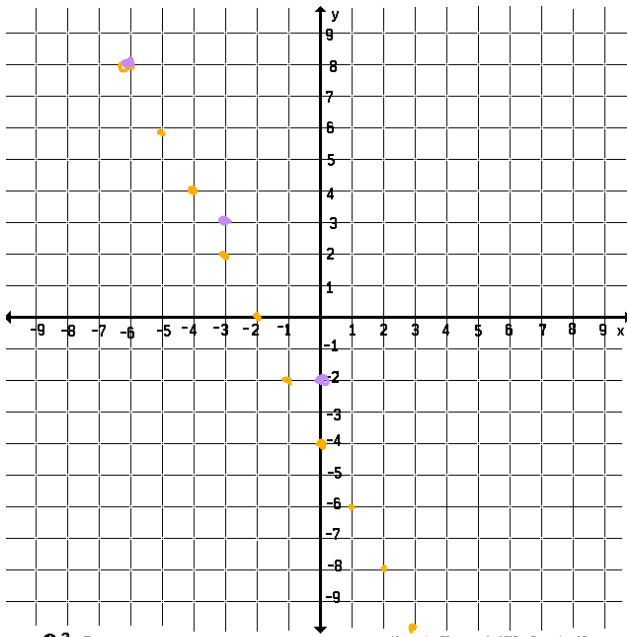
What would be the solution if the second equation was $-3y = 6x - 12$? Why?

+

$$2x + y = 4 \quad \rightarrow y = -2x + 4$$

$$\frac{-3y}{-3} = \frac{6x - 12}{-3} \quad \rightarrow y = -2x + 4$$

Inf number
of solutions



$$y = -2x + 4$$

$$y = -\frac{5}{3}x + 2$$

$(-6, 8)$

Homework

Page 372-373 #16 - 32 even
41 - 43 all