



# What Did the Teacher Do With Ogar's Cheese Report?

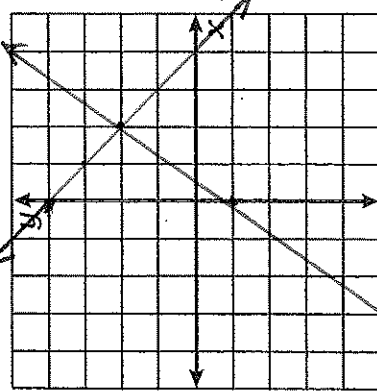


Solve each system of equations by graphing. Cross out the letters above each correct answer. When you finish, the remaining letters will tell you the answer to the title question.



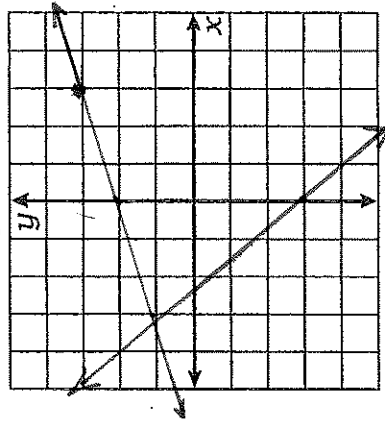
1.  $y = \frac{3}{2}x - 1$  (2, 2)

$y = -x + 4$



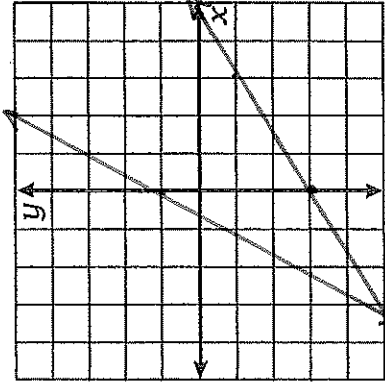
2.  $y = \frac{1}{3}x + 2$  (-3, 1)

$y = -\frac{4}{3}x - 3$



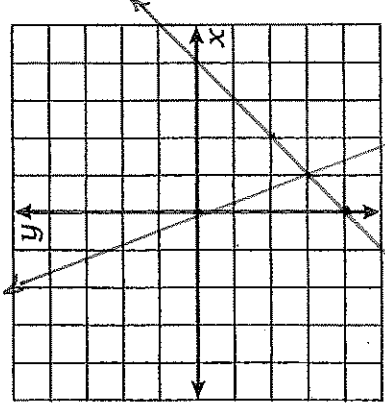
3.  $y = 2x + 1$  (-3, -5)

$-2x + 3y = -9$



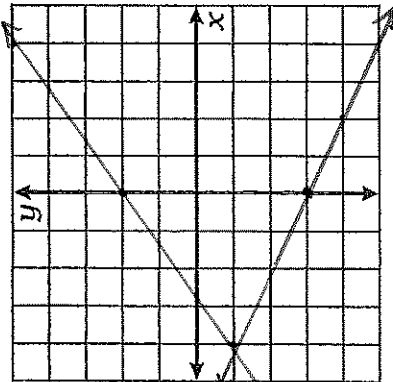
4.  $3x + y = 0$  (1, -3)

$x - y = 4$



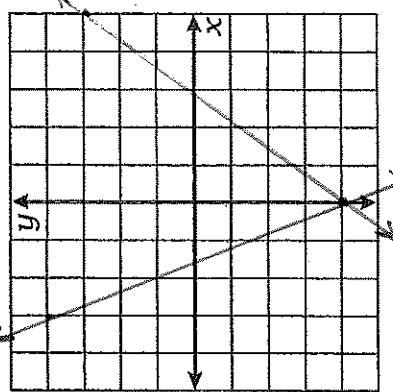
5.  $-3x + 4y = 8$  (-4, -1)

$x + 2y + 6 = 0$



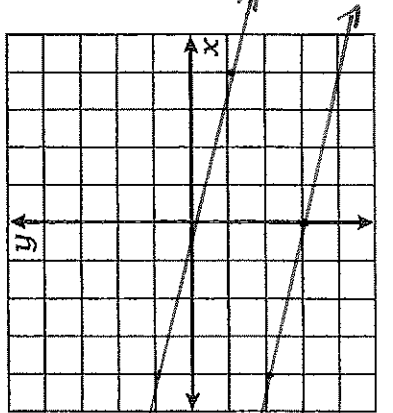
6.  $7x - 5y = 20$  (0, -4)

$-8x - 3y = 12$



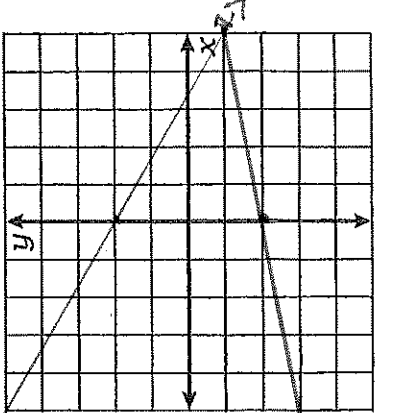
7.  $-x - 4y = 12$  no solution

$20x + 80y = 0$



8.  $30x + 50y - 100 = 0$

$3x - 15y - 30 = 0$  (5, -1)



HE	GR	AT	ED	IT
(-3, 1)	(-2, 4)	(-2, -3)	(-4, 0)	(1, -1)
(4, 3)	(5, -1)	(2, 2)	(1, -3)	(1, -1)
(-4, -1)	(-3, -5)	(0, -4)		

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

$(2, 2)$

$$\begin{array}{r} \frac{3}{2}x - 1 = -x + 4 \\ \quad \quad \quad +1 \quad \quad \quad +1 \\ \hline \frac{3}{2}x = -x + 5 \\ +x \quad \quad \quad +x \\ \hline \left(\frac{2}{5}\right) \frac{5}{2}x = 5 \left(\frac{2}{5}\right) \\ x = 2 \end{array}$$

$$\begin{array}{l} y = -x + 4 \\ y = -(2) + 4 \\ y = 2 \end{array}$$

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

$(-3, 1)$

$$\begin{array}{r} \frac{1}{3}x + 2 = -\frac{4}{3}x - 3 \\ +\frac{4}{3}x \quad \quad \quad +\frac{4}{3}x \\ \hline \frac{5}{3}x + 2 = -3 \\ \quad \quad \quad -2 \quad \quad -2 \\ \hline \left(\frac{3}{5}\right) \frac{5}{3}x = -5 \left(\frac{3}{5}\right) \\ x = -3 \end{array}$$

$$\begin{array}{l} y = \frac{1}{3}x + 2 \\ y = \frac{1}{3}(-3) + 2 \\ y = -1 + 2 \\ y = 1 \end{array}$$

3.  $y = 2x + 1$   
 $-2x + 3y = -9$

$(-3, -5)$

$$\begin{array}{r} -2x + 3y = -9 \\ +2x \quad \quad \quad +2x \\ \hline 3y = 2x - 9 \\ \frac{3y}{3} = \frac{2x - 9}{3} \\ y = \frac{2}{3}x - 3 \end{array}$$

$$\begin{array}{r} 3 \left[ \frac{2}{3}x - 3 = 2x + 1 \right] \\ 2x - 9 = 6x + 3 \\ \quad \quad \quad -3 \quad \quad \quad -3 \\ \hline 2x - 12 = 6x \\ -2x \quad \quad \quad -2x \\ \hline -12 = 4x \\ \frac{-12}{4} = \frac{4x}{4} \\ -3 = x \end{array}$$

$$\begin{array}{l} y = 2x + 1 \\ y = 2(-3) + 1 \\ y = -6 + 1 \\ y = -5 \end{array}$$

$$4. \begin{cases} 3x + y = 0 \\ x - y = 4 \end{cases}$$

 $\Rightarrow$ 

$$\begin{aligned} y &= -3x \\ y &= x - 4 \end{aligned}$$

$$\begin{aligned} -3x &= x - 4 \\ -x & \quad -x \\ \hline -4x &= -4 \\ -4 & \quad -4 \\ \hline x &= 1 \end{aligned}$$

$$\begin{aligned} 3x + y &= 0 \\ 3(1) + y &= 0 \\ 3 + y &= 0 \\ -3 & \quad -3 \\ \hline y &= -3 \end{aligned}$$

$$(1, -3)$$

$$5. \begin{cases} -3x + 4y = 8 \\ x + 2y + 6 = 0 \end{cases}$$

 $\Rightarrow$ 

$$\begin{aligned} x &= \frac{4}{3}y - \frac{8}{3} \\ x &= -2y - 6 \end{aligned}$$

$$\begin{aligned} 3 \left[ \frac{4}{3}y - \frac{8}{3} = -2y - 6 \right] \\ 4y - 8 &= -6y - 18 \\ +6y & \quad +6y \\ \hline 10y - 8 &= -18 \\ +8 & \quad +8 \\ \hline 10y &= -10 \\ 10 & \quad 10 \\ \hline y &= -1 \end{aligned}$$

$$\begin{aligned} x + 2y + 6 &= 0 \\ x + 2(-1) + 6 &= 0 \\ x - 2 + 6 &= 0 \\ x + 4 &= 0 \\ -4 & \quad -4 \\ \hline x &= -4 \end{aligned}$$

$$(-4, -1)$$

$$6. \begin{cases} 7x - 5y = 20 \\ -8x - 3y = 12 \end{cases}$$

 $\Rightarrow$ 

$$\begin{aligned} \frac{7}{5}x - 4 &= y \\ -\frac{8}{3}x - 4 &= y \end{aligned}$$

$$\begin{aligned} \frac{7}{5}x - 4 &= -\frac{8}{3}x - 4 \\ +4 & \quad +4 \end{aligned}$$

$$\begin{aligned} 15 \left[ \frac{7}{5}x = -\frac{8}{3}x \right] \\ 21x &= -40x \\ +40x & \quad +40x \\ \hline 61x &= 0 \\ 61 & \quad 61 \\ \hline x &= 0 \end{aligned}$$

$$\begin{aligned} 7x - 5y &= 20 \\ 7(0) - 5y &= 20 \\ -5y &= 20 \\ -5 & \quad -5 \\ \hline y &= -4 \end{aligned}$$

$$(0, -4)$$

$$7. \quad -x - 4y = 12$$

$$\frac{20x}{20} + \frac{80y}{20} = \frac{0}{20}$$

$$\Rightarrow \quad x = -4y - 12$$

$$x = -4y$$

No  
Solution

$$\begin{array}{r} -4y - 12 = -4y \\ +4y \qquad +4y \\ \hline -12 = 0 \end{array}$$

↙ false statement  
means no solution

$$8. \quad \frac{30x}{30} + \frac{50y}{30} - \frac{100}{30} = \frac{0}{30}$$

$$\frac{3x}{15} - \frac{15y}{15} - \frac{30}{15} = \frac{0}{15}$$

$$\Rightarrow \quad \frac{3}{5}x + y - 2 = 0 \Rightarrow y = -\frac{3}{5}x + 2$$

$$\frac{1}{5}x - y - 2 = 0 \Rightarrow y = \frac{1}{5}x - 2$$

(5, -1)

$$5 \left[ -\frac{3}{5}x + 2 = \frac{1}{5}x - 2 \right]$$

$$\begin{array}{r} -3x + 10 = x - 10 \\ +10 \qquad +10 \\ \hline -3x + 20 = x \\ +3x \qquad +3x \\ \hline 20 = 4x \\ \frac{20}{4} = \frac{4x}{4} \\ 5 = x \end{array}$$

$$3x - 15y - 30 = 0$$

$$3(5) - 15y - 30 = 0$$

$$15 - 15y - 30 = 0$$

$$\begin{array}{r} -15y - 15 = 0 \\ +15 \qquad +15 \\ \hline -15y = 15 \\ \frac{-15y}{-15} = \frac{15}{-15} \\ y = -1 \end{array}$$