

7. Solve the following system.

$$3y - (2y - 6) = 11 \quad \begin{cases} 3y - x = 11 \\ 2x = 4y - 12 \end{cases}$$

out of order!

$4y = 11$
 $y = 5$
 $3(5) - x = 11$
 $15 - x = 11$
 $-x = -4$
 $x = 4$

$$\begin{array}{r} -x + 3y = 11 \quad \xrightarrow{-2} \quad -2x + 6y = 22 \\ 2x - 4y = -12 \quad \xrightarrow{+} \quad 2x - 4y = -12 \\ \hline 2y = 10 \\ y = 5 \\ 2x = 4(5) - 12 \\ 2x = 8 \\ x = 4 \end{array} \quad (4, 5)$$

8. The school student council is buying hats to give to their 18 members. They compare the cost of buying the hats from two different companies.

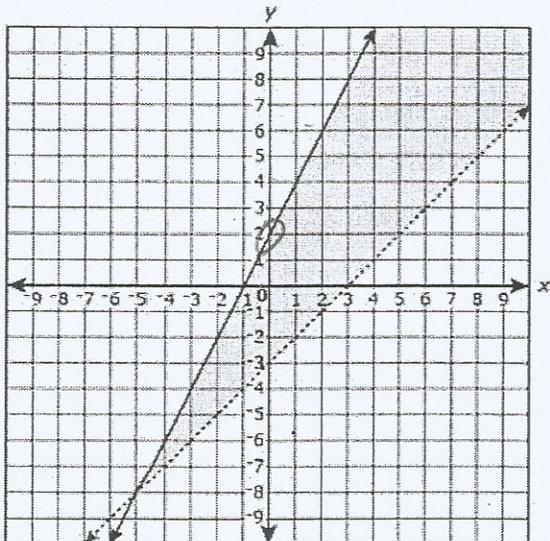
- Company A charges \$11 per hat plus a \$50 setup fee.
- Company B charges \$8 per hat plus a \$75 setup fee.

A: $11x + 50$ for 18 hats: $11(18) + 50 = 248$
 B: $8x + 75$ for 18 hats: $8(18) + 75 = 219$

Which company should the student council buy hats from to get the best price? Justify your choice.

Company B b/c it's 29 cheaper (219 vs 248)

9. The solution set of a system of inequalities is shown in the coordinate grid. What inequality represents the upper boundary of the system?



*y int 2
 slope = 2/1
 solid
 shaded below*

$$y \leq \frac{2}{1}x + 2$$

10. Is the point $(-1, 5)$ a solution to the inequality $2y - 11 < 4x$? Justify your answer.

$$\begin{aligned} 2(5) - 11 &< 4(-1) \\ 10 - 11 &< -4 \\ -1 &< -4 \end{aligned}$$

FALSE NOT a solution

11. Solve the following system of equations:

$$\begin{array}{r} 2x - 4y = 8 \quad \xrightarrow{-} \quad 2x - 4y = 8 \\ -x + 2y = 10 \quad \xrightarrow{\times 2} \quad -2x + 4y = 20 \\ \hline 0 = 28 \end{array}$$

no solution