

Algebra 2
Review Ch. 3.1-3.4
Quiz 3.3-3.4 today

MCT 3.1-3.4 Fri.
at most: one linear programming problem

Example 3

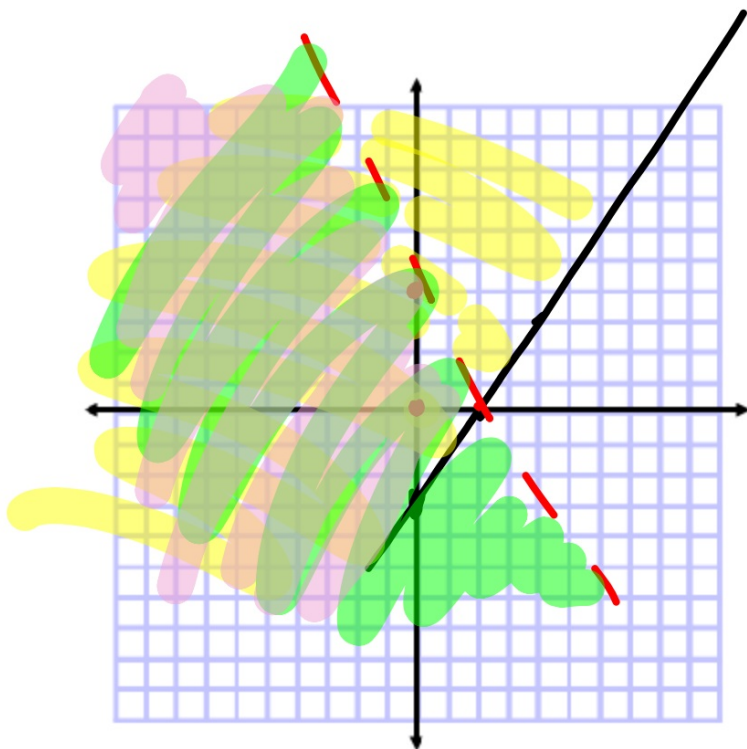
Solve the system of inequalities by graphing.

$$y \geq \frac{3}{2}x - 3$$

$$y < 4 - 2x$$

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

$$y = -2x + 4$$



Example 5

Solve the system of equations.

$$x + y + 2z = 6$$

$$2x + 5z = 12$$

$$x + 2y + 3z = 9$$

3. Ms. Garza invested $\overbrace{50,000}^{a, b, c}$ in three different accounts. She invested three times as much money in an account that paid 8% interest than an account that paid 10% interest. The third account earned 12% interest. If she earned a total of \$5160 in interest in a year, how much did she invest in each account?

$$\rightarrow a + b + c = 50,000$$

$$\rightarrow .08a + 0.1b + 0.12c = 5160$$

$$\rightarrow b = 3a$$

f s t

20. **CCSS SENSE-MAKING** A friend e-mails you the results of a recent high school swim meet. The e-mail states that 24 individuals placed, earning a combined total of 53 points. First place earned 3 points, second place earned 2 points, and third place earned 1 point. There were as many first-place finishers as second- and third-place finishers combined.
- Write a system of three equations that represents how many people finished in each place.
 - How many swimmers finished in first place, in second place, and in third place?
 - Suppose the e-mail had said that the athletes scored a combined total of 47 points. Explain why this statement is false and the solution is unreasonable.

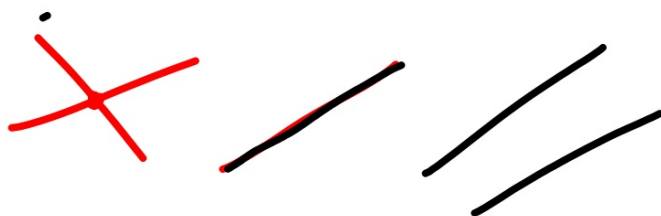
$$\begin{aligned} f + s + t &= 24 \\ 3f + 2s + t &= 53 \\ f &= s + t \end{aligned}$$

Example 1

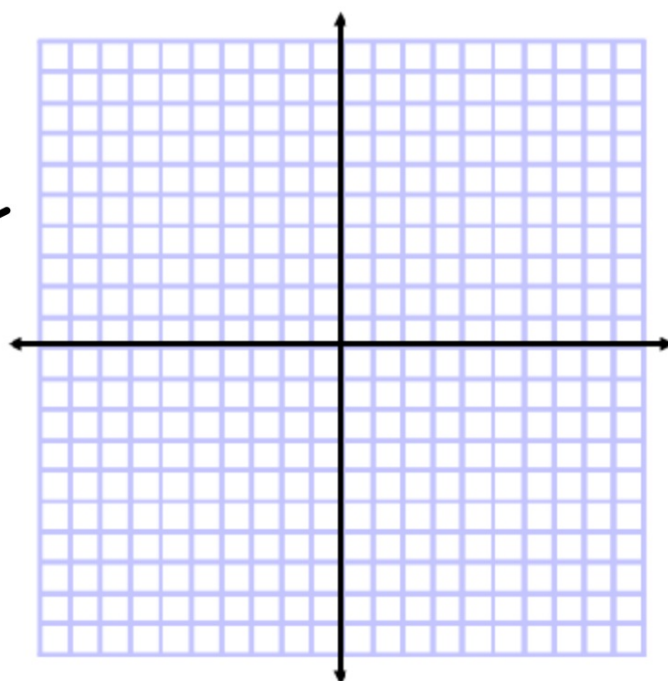
Solve the system of equations by graphing.

$$x + y = 4$$

$$x + 2y = 5$$



Consistent/inconsistent
Dependent/independent
Inconsistent



15. **LAWN CARE** André and Paul each mow lawns. André charges a \$30 service fee and \$10 per hour. Paul charges a \$10 service fee and \$15 per hour. After how many hours will André and Paul charge the same amount?

$$\begin{array}{rcl} \text{A} & & \text{P} \\ 30 + 10h & = & 10 + 15h \\ -10 & -10h & -10 \quad -10h \\ \hline h=4 & & \frac{20}{5} = \frac{5h}{5} \end{array}$$

Example 2

Solve the system of equations by using either substitution or elimination.

$$3x + 2y = 1$$

$$\textcircled{y} = -x + 1$$

