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

MCT 3.1-3.4 Fri.
one linear programming problem

Example 3

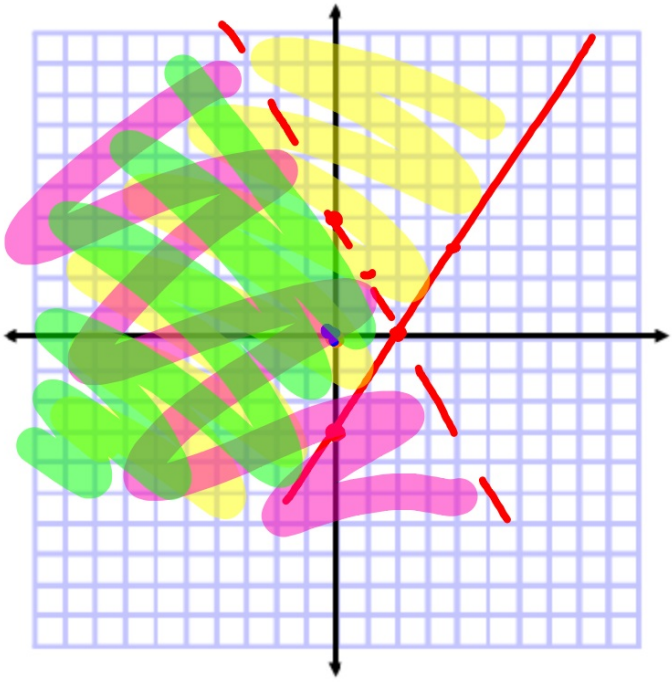
Solve the system of inequalities by graphing.

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

$y < 4 - x$

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

$y = -2x + 4$



$2x+10=12$
$-10 \quad -10$
$2x=2$
$x=1$

(1, 1, 2)

Example 5

Solve the system of equations.

A. $x+y+4z=6$

B. $2x+5z=12$

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

$1+y+4=6$
$y+5=6$
$y=1$

$1+2+6=9$

-2

$-2x-2y-4z=-12$

$x+2y+3z=9$

$-x-z=-3$

$-2x-2z=-6$
$2x+5z=12$

$3z=6$

$\frac{3z}{3}=\frac{6}{3}$

$z=2$

A 8% B 10% C 12%

3. Ms. Garza invested $50,000 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?

$A + B + C = 50{,}000$

$100(0.08A + 0.1B + 0.12C = 5160)$

$8A + 10B + 12C = 51600$

$3B = A$

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.

a. Write a system of three equations that represents how many people finished in each place.

b. How many swimmers finished in first place, in second place, and in third place?

c. 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.

$3F + 2S + T = 53$

$F + S + T = 24$

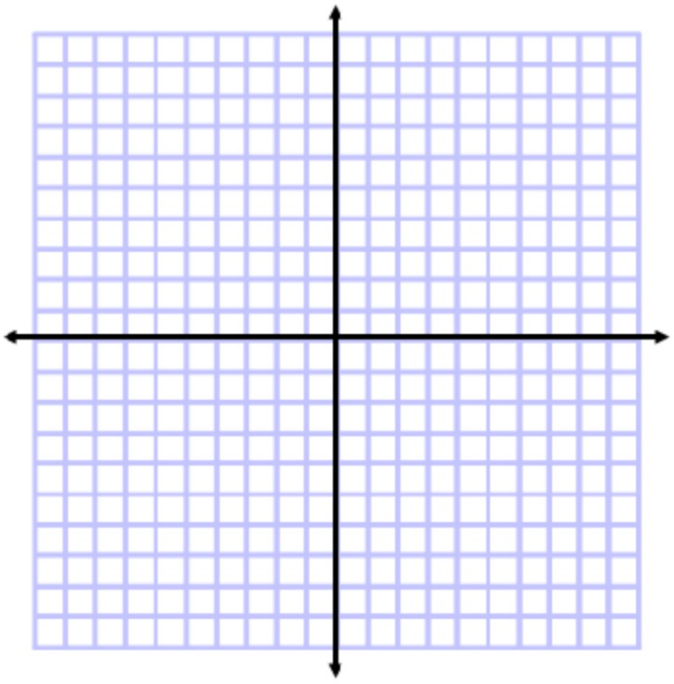
$F = S + T$

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?

A P

$10x + 30 = 15x + 10$

$-10x \quad -10 \qquad -10x \quad -10$

$20 = 5x$

$\frac{20}{5} = \frac{5x}{5}$

4 lawns

Example 2

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

$3x + 2y = 1$

$y = -x + 1$