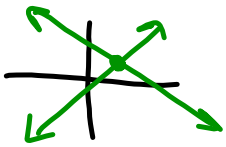
Topics-

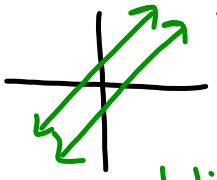
# Ch 3 - Systems

3.1 → Graph the system

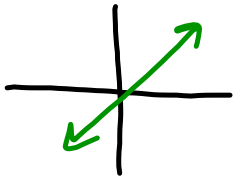
↳ solution is where they cross (or don't)



1 solution



no solution



Infinitely many

↳ Classify:

consistent & independent

inconsistent

consistent & dependent

3.2 – Solving Algebraically

↳ sub.

1) solve for x or y

2) plug it in

↳ elim.

1) try to cancel x or y

2) Add vertically

3) plug x or y back in

4) Answer as (x, y)

3.3 → Systems of inequalities

↳ graph both lines

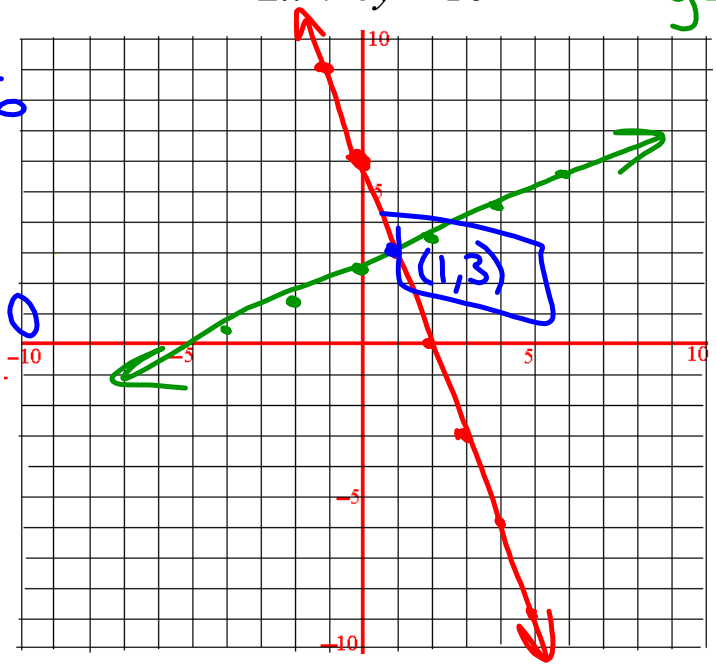
Solve by graphing. Check algebraically.

$$3x + y = 6$$
$$-2x + 4y = 10$$

$y = -3x + 6$

$\frac{4y}{4} = \frac{2x}{4} + \frac{10}{4}$

$y = \frac{1}{2}x + \frac{5}{2}$




$3(1)+(3)=6$

$6=6$

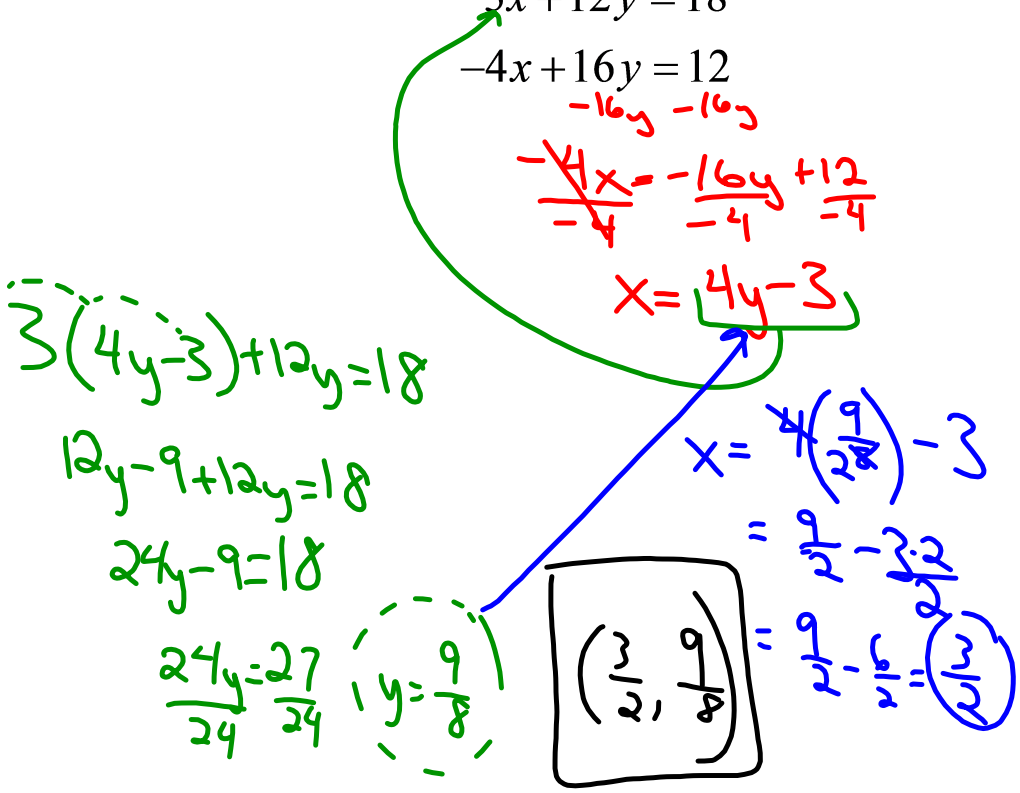
$-2(1)+4(3)=10$

$10=10$

Classify the system: consistent & independent

Solve the system by substitution.

$$3x+12y=18$$
$$-4x+16y=12$$




Classify the system:

Solve the system by elimination.

$6(7x - 21y = 42)$

$-7(6x - 18y = 36)$

$42x - 126y = 252$

$-42x + 126y = -252$

$0 = 0$

Infinitely many

Classify the system: consistent & dependent