




Bell Ringer

Sketch an example of a system of linear equations with:

- ~ no solution  parallel lines
- ~ one solution 
- ~ infinitely many solutions  same line

Looking at the equations, how can you determine how many solutions a system has?

Agenda

- Bell Ringer ✓
- Pass Back Papers ✓
- Notes: Substitution
- CW: Word Wall
- Closure

Steps:

1. Solve one equation for a variable, either one will do.
2. Plug the expression into the second equation – your equations will be entirely in one variable now.
3. Solve the equation for the variable.
4. Use this value in the first equation to find the second value.
5. Remember that your answer is an ordered pair.

(x, y)

$$1. \begin{cases} y = 2x \\ 3x + 3y = -18 \end{cases}$$

$$3x + 3(2x) = -18$$

$$3x + 6x = -18$$

$$\frac{9x}{9} = \frac{-18}{9}$$

$$x = -2$$

$$y = 2x$$

$$y = 2(-2) = -4$$

$$(-2, -4)$$

$$2. \begin{cases} y = 6x - 11 \\ -2x - 3y = -7 \end{cases}$$

$$-2x - 3(6x - 11) = -7$$

$$-2x - 18x + 33 = -7$$

$$-20x + 33 = -7$$

$$\frac{-20x}{-20} = \frac{-40}{-20}$$

$$x = 2$$

$$y = 6x - 11$$

$$y = 6(2) - 11 = 1$$

$$(2, 1)$$

WORD WALL

- color & creativity
- neatness
- **SIZE**
- accurate & spelling

10 pts
end of
class

Closure

Post-It Note time: