

HW due today!!

### WARM UP

$$-2(x+3) - 3(x-5)$$

① what happens when  $x=0$ ?

$$\begin{aligned} & -2(0+3) - 3(0-5) \\ \hookrightarrow & -2(3) - 3(-5) \\ \hookrightarrow & -6 + (+15) \rightarrow \textcircled{9} \end{aligned}$$

② what happens when  $x=-3$

$$\begin{aligned} & -2(0) - 3(-3-5) \\ \hookrightarrow & 0 - 3(-8) = \textcircled{24} \end{aligned}$$

$$-2 \cdot (x+3) - 3 \cdot (x-5) = 1$$

$$\hookrightarrow -2x - 6 + -3x + 15 = 1$$

$$\hookrightarrow -5x + 9 = 1$$

$$\Rightarrow -5x = -8$$

$$x = \frac{8}{5}$$

Equations are statements.

True / False / ~~Indecidable~~

equations are either ① True

② False

"..."

condition

$$-2(x+3) - 3(x-5) = 1$$

True only when  
 $x = 8/5$

is this T/F or sometimes T?

①  $4(x+2y) = 4x+8y$  *always True*

②  $4(x+2y) = 4x-8y$  *sometimes true; true if  $y=0$*

$$\begin{array}{rcl} 4x + 8y & = & 4x - 8y \\ -4x & & -4x \end{array}$$

$$\frac{8y}{-8} = \frac{-8y}{-8}$$



$$-y = y$$

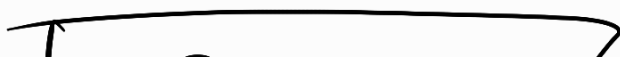
$$y = 0$$

$$3 + \boxed{0} = 3$$

$$3 + (-3) = 0$$

$$0 + (-0) = 0$$

$$0 + (0) = 0$$



$$\boxed{0 = 0}$$

$$4(x+2y) = 4x + 8y$$

$$\underbrace{4(x+2y)}_{\text{pink}} = 4x + 8y$$

$$\underline{-4x}$$

$$\underline{-4x}$$

$$8y = 8y$$

$$\underline{-8y}$$

$$\underline{-8y}$$

$$0 = 0$$

FALSE

$$\checkmark$$

$$4 = 0$$

math ← properties of objects

what is a prime #  
whose square is less than 10

2, 3, 5, 7, 11, 13, 17

Ans: 2, 3

Can  
if  $x, y > 1$ ?

cond. True

$$\boxed{2x + y} = \boxed{x + 2y}$$

$-x$

$$\begin{array}{r} x + y = 2y \\ -y \quad -y \\ \hline x = y \end{array}$$

