Warm Up:
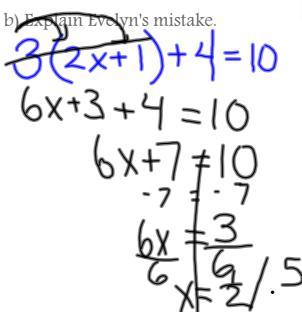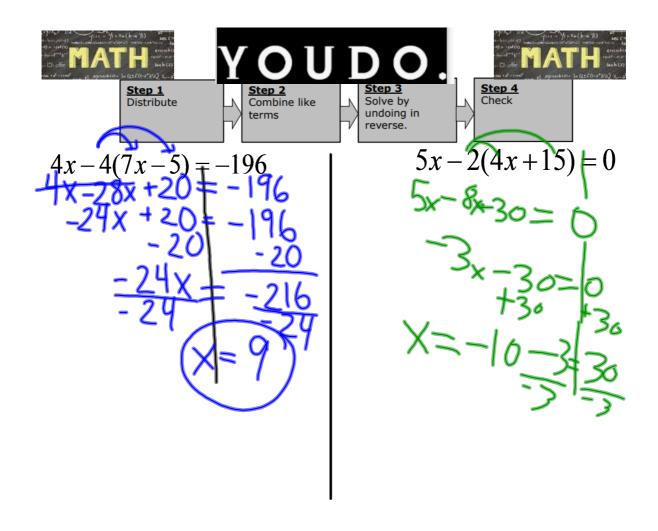
Evelyn knows she solved the following equation incorrectly because it doesn't check.

a) Solve the equation correctly.

b) Explain Evelyn's mistake.

$$3(2x+1) + 4 = 10$$
$$6x + 3 + 4 = 10$$
$$9x + 4 = 10$$
$$\; -4 \quad -4$$
$$\frac{9x}{9} = \frac{6}{9}$$
$$x = \frac{6}{9} = \frac{2}{3}$$

$$3(2x+1) + 4 = 10$$
$$6x + 3 + 4 = 10$$
$$6x + 7 \neq 10$$
$$\; -7 \neq -7$$
$$\frac{6x}{6} \neq \frac{3}{6}$$
$$x \neq \frac{3}{2} / .5$$

MATH   **YOUDO.**   **MATH**

Step 1	Step 2	Step 3	Step 4
Distribute	Combine like terms	Solve by undoing in reverse.	Check

$$4x - 4(7x - 5) = -196$$

$$4x - 28x + 20 = -196$$
$$-24x + 20 = -196$$
$$ - 20 \qquad\qquad -20$$
$$-24x = -216$$
$$\overline{-24} \qquad\quad \overline{-24}$$

$$\boxed{x = 9}$$

$$5x - 2(4x + 15) = 0$$

$$5x - 8x - 30 = 0$$
$$-3x - 30 = 0$$
$$ +30 \quad +30$$
$$x = -10 \quad \frac{-3x}{-3} \frac{30}{-3}$$

Solving Equations that require Combining Like-Terms
CONTINUED

With your partner, find and fix the errors in the equations below.

We'll go over it in about 15 minutes!

Problem and Incorrect Solution	Correct Solution (show all work)	Explanation of Errors Made (some have more than one mistake)
$-2(8m + 8) = -16$ $-16m + 16 = -16$ $ -16 \quad -16$ $\overline{-16m = -32}$ $\dfrac{-16m}{16} = \dfrac{-32}{16}$ $m = -2$	$-2(8m+8)=-16$ $-16m - 16 = -16$ $ +16 \quad +16$ $\overline{}$ $\dfrac{-16m = 0}{-16 -16}$ $\boxed{m = 0}$	She didn't distribute the negative

Problem and Incorrect Solution	Correct Solution (show all work)	Explanation of Errors Made (some have more than one mistake)
$5(1 + 4h) + 2h = 27$ $5 + 20h + 2h = 27$ $27h = 27$ $\dfrac{27h}{27} = \dfrac{27}{27}$ $h = 1$		

Problem and Incorrect Solution	Correct Solution (show all work)	Explanation of Errors Made (some have more than one mistake)
$-2(x - 8) + 4x = -12$ $-2x - 16 + 4x = -12$ $-2x - 16 + 4x = -12$ $-2x - 16 = -12$ $+16 \quad +16$ _____ $\dfrac{-2x}{2} \quad \dfrac{= 4}{2}$ $x \quad = 2$		

Solve and check your solution.

$$15 - 2(3 - 2x) = 46$$

Before you leave class today...

COMPLETE THE EXIT TICKET ON THE LAST

PAGE AND TURN IT IN!!!

Name: _____

Score: _____/5

EXIT TICKET

tear this page off and turn it in before you leave class today

Solve the equation shown below. SHOW ALL WORK!

$$115 = -4x - 3(-5x + 2)$$