Panel 1 (Kickoff)

Lesson 2.2- SWBAT solve equations with the distributive property.

Kickoff- Solve and check each of the following equations.

1) $\frac{x-2}{4} = -14$ (4)

Check

$x - 2 = -56$
$+2 \quad +2$
$x = -54$

$\frac{(-54)-2}{4} = -14$
$\frac{-56}{4} = -14$ ✓
$-14 = -14$ ✓

2) $2a - 9 = 9$

$+9 \quad +9$
$\frac{2a}{2} = \frac{18}{2}$ $a = 9$

Check

$2(9) - 9$
$18 - 9$
$9 = 9$

3) $\frac{x}{2} - 2 = -7$

$+2 \quad +2$
$\frac{x}{2} = -5 (2)$
$x = -10$

Check
$\frac{-10}{2} - 2 = -7$
$-7 = -7$ ✓

4) $-15 = 3b - 9$

$+9 \quad +9$
$\frac{-6}{3} = \frac{3b}{3}$
$-2 = b$

Check
$-15 = 3(-2) - 9$
$-15 = -15$ ✓

Panel 2 (Steps to Solving Equations)

Steps to Solving Equations

1) Simplify both sides of the equal sign.
2) Find inverse operation (addition/subtraction first)
3) Perform the inverse operation.
4) Draw a line and cross out what you can.
5) Bring down everything else.
6) Repeat!

Example: $-2(x + 3) = 10$

$-2x - 6 = 10$
$+6 \quad +6$
$\frac{-2x}{-2} = \frac{16}{-2}$
$x = -8$

Check
$-2(x + 3) = 10$
$-2((-8) + 3) = 10$
$10 = 10$ ✓

Panel 3 (Directions)

Directions: Solve and check each of the following equations.

1) $-140 = 3(8x - 2)$ Check

$-140 = 24x - 6$
$+6 \qquad +6$
$\frac{-134}{24} = \frac{24x}{24}$
$-\frac{67}{12} = x$

Check
$-140 = 3(8(-\frac{67}{12}) - 2)$
$-140 = -140$ ✓

2) $6(4x - 5) = -102$ Check

$24x - 30 = -102$
$+30 \quad +30$
$\frac{24x}{24} = \frac{-72}{24}$
$x = -3$

Panel 4

3) $-104 = -8(1 + 6m)$ Check

$m = 2$

4) $-\frac{2}{5}(10 + 5n) = -90$ Check

$n = 43$

Panel 5

5) $-\frac{2}{3}(3a - 9) = 18$ Check

$a = -6$

6) $5(-5b - 6) = -120$ Check

$b = \frac{5}{18}$

7) $-7(7 + 6m) = 245$ Check

$m = -7$

8) $-6(2x + 10) = 0$ Check

$x = -5$

Panel 6

9) $-6(m + 8) = -90$ Check

$m = 7$

10) $189 = -7(8 + 5x)$ Check

$189 = -56 - 35x$
$+56 \quad +56$
$\frac{145}{-35} = \frac{-35x}{-35}$
$-7 = x$

11) $-5(3b + 2) = -100$ Check

$b = 6$

12) $-96 = -4(4 + 4r)$ Check

$r = 5$

13) $6(3k + 5) = 39$ 　　　　Check 　　　14) $2(3x + 1) = 11$ 　　　　Check

$$K = \frac{1}{2}$$

$$X = \frac{3}{2}$$

Test Review