

Warm Up
Questions

1. $6x - 12 = 4x + 8 - 2x$

2. $\frac{3x}{2} - 1 = 4x + 4$

3. $5 = \frac{3x}{5} - 10$

$$\begin{aligned} 1. \quad & 6x - 12 = 4x + 8 - 2x \\ & 6x + 2x - 4x = 8 + 12 \\ & 4x = 20 \\ & \frac{4x}{4} = \frac{20}{4} \\ & x = 5 \end{aligned}$$

$$2. \quad \frac{3x}{2} - 1 = 4x + 4$$

Handwritten work showing the solution process:

$$3x - 2 = 8x + 8 + 2$$

Handwritten annotations: Red 'x2' above 3x, 1, 4x, and 4. Green arrows and circles show the process of multiplying both sides by 2. The 3x term is annotated with '-8x + 2' and the 8x term with '-8x'. The -2 and 8x terms are circled in green.

$$3x - 8x = 8 + 2$$
$$\underline{\underline{-5x}} = \underline{\underline{10}}$$
$$x = -2$$

$$3. \quad 5^{\times 5} = \frac{3x^{\times 5}}{5} - 10^{\times 5}$$

$$25 = 3x - 50$$

$$3x - 50 = 25$$

$$3x = 25 + 50$$

$$3x = 75$$

$$x = 25$$

1. $5(x - 1) = 25$

$5x - 5 = 25 + 5$

$\frac{5x}{5} = \frac{30}{5}$

$x = 6$

2. $7(2x - 2) = 14$

$14x - 14 = 14 + 14$

$\frac{14x}{14} = \frac{28}{14}$

$x = 2$

$$3. \quad 2(3x - 1) = 4(x - 2)$$

$$6x - 2 = 4x - 8 + 2$$

$$6x = 4x - 8 + 2$$

$$6x - 4x = -6$$

$$\frac{2x}{2} = \frac{-6}{2}$$

$$x = -3$$

$$4. \quad \frac{3}{2}(x - 1) = 6^{+2}$$

$$3(x - 1) = 12$$

$$3x - 3 = 12 + 3$$

$$\frac{3x}{3} = \frac{15}{3}$$

$$x = 5$$

$$5. \quad 10 = \frac{2}{3}(2x - 1)$$

$$6. \quad 4(5x - 2) = 2(x - 1)$$

$$7. \quad 4(5x + 2) = 40(x - 1) - 8$$