

Solving A Linear Equation:

2. Combining Like Terms On Both Sides of = Sign

Step I: Identify monomials (M) separated by + or – signs.

Step II: Underline with the same color, monomials that have the same variables, and all constants (terms with no variables).

Step III: On each side of the = sign, add the constants and then add coefficients of all variable terms underlined with the same color (note that the variables do not change, just the coefficients).

Linear Equation Example:

$$\begin{array}{cccccccc} \text{M} & & \text{M} & & \text{M} & & \text{M} & & \text{M} & & \text{M} & & \text{M} \\ 2X + 3 + 5X - 5 = X + 8 - 3X \end{array}$$

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

$$(2+5)X + (3+-5) = (1+-3)X + 8$$

$$7X + -2 = -2X + 8$$

$$7X - 2 = -2X + 8$$