

Simplifying by Combining Like Terms

Overview of problems



Example Set: A

Identify coefficients, terms, constants, and like terms

$$3m + 8m$$

$$-6x + 2$$

$$2ab + 7 - 3ab$$

$$5y^2 + y + 2 + y^2$$

$$4m - 2m + m$$

$$-10(w - 1) + 3w + 2$$

$$-3(8x) + -5(-2x) + 4x(x)$$



Example Set: B

Simplify the expression

$$-7m + 2m$$

$$x + 4 + 3x - 9$$

$$6ab + 10ab$$

$$4x^2y - 3xy^2 + 2x^2y^2$$

$$2y + 2y^2 - 2y + 8$$

$$t - 10 + 2t - 3 + 4t$$

$$4w(w+1) + 6w^2 - w + 8$$

$$-3z + 8y + 5m + z - 2y - m$$



Example Set: C

Simplify the expression

$$6(-2x) + -5(4x) - x + 7$$

$$3z + 2(z + 5)$$

$$2(g + 6) + 4(g + 1)$$

$$-9xy + 2 + 6xy^2 + xy$$

$$4m(2m + 2) - m(6m + 1)$$

Simplifying by Combining Like Terms

Overview of problems- KEY



Example Set: A

Identify coefficients, terms, constants, and like terms

$$3m + 8m$$

coefficients 3, 8

terms 3m, 8m

constants none

like terms 3m, 8m

$$-6x + 2$$

coefficients -6

terms -6x

constants 2

like terms none

$$2ab + 7 - 3ab$$

coefficients $2, -3$

terms $2ab, -3ab$

constants 7

like terms $2ab, -3ab$

$$5y^2 + y + 2 + y^2$$

coefficients $5, 1$

terms $5y^2, y, y^2$

constants 2

like terms $5y^2, y^2$

$$4m - 2m + m$$

coefficients 4, -2, 1

terms $4m, -2m, m$

constants none

like terms $4m, -2m, m$

$$-10(w - 1) + 3w + 2$$

coefficients -10, 3

terms $-10w, 3w$

constants 10, 2

like terms $-10w, 3w$

$$-3(8x) + -5(-2x) + 4x(x)$$

coefficients $-24, 10, 4$

terms $-24x, 10x, 4x^2$

constants *none*

like terms $-24x, 10x$



Example Set: B

Simplify the expression

$$-7m + 2m = -5m$$

$$x + 4 + 3x - 9 = 4x + -5$$

$$6ab + 10ab = 16ab$$

$$4x^2y - 3xy^2 + 2x^2y^2 = 4x^2y - 3xy^2 + 2x^2y^2$$

$$2y + 2y^2 - 2y + 8 = 2y^2 + 8$$

$$t - 10 + 2t - 3 + 4t = 7t + -13$$

$$4w(w+1) + 6w^2 - w + 8 =$$
$$10w^2 + 3w + 8$$

$$-3z + 8y + 5m + z - 2y - m =$$
$$-2z + 6y + 4m$$



Example Set: C

Simplify the expression

$$6(-2x) + -5(4x) - x + 7 = -33x + 7$$

$$3z + 2(z + 5) = 5z + 10$$

$$2(g + 6) + 4(g + 1) = 6g + 16$$

$$\begin{aligned} -9xy + 2 + 6xy^2 + xy = \\ -8xy + 6xy^2 + 2 \end{aligned}$$

$$\begin{aligned} 4m(2m + 2) - m(6m + 1) = \\ 2m^2 + 7m \end{aligned}$$