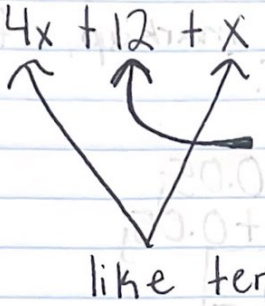
Ch. 5.5 Simplify Algebraic Expressions

Objective: To simplify algebraic expressions.



Ex. 1: Identify the terms, like terms, coefficients, and constants in the expression $6n - 7n - 4 + n$.

$6n + (-7n) + (-4) + n$

Terms: $6n, -7n, -4, n$
Like terms: $6n, -7n, n$
Coefficients: $6, -7, 1$
Constant: -4

Ex. 2 Write $7x - 2 - 7x + 6$ in simplest form.

$$\begin{aligned} 7x - 2 - 7x + 6 &= 7x + (-2) + (-7x) + 6 \\ &= 7x + (-7x) + (-2) + 6 \\ &= 0x + 4 \\ &= \boxed{4} \end{aligned}$$

Ex. 3 The cost of a jacket j after a 5% markup can be represented by the expression $j + 0.05j$. Simplify the expression. Then determine the total cost of the jacket after the markup, if the original price, $35.

$$j + 0.05j = 1j + 0.05j$$
$$= 1.00j + 0.05j$$
$$= 1.05j$$

$$1.05(35) = \$36.75$$