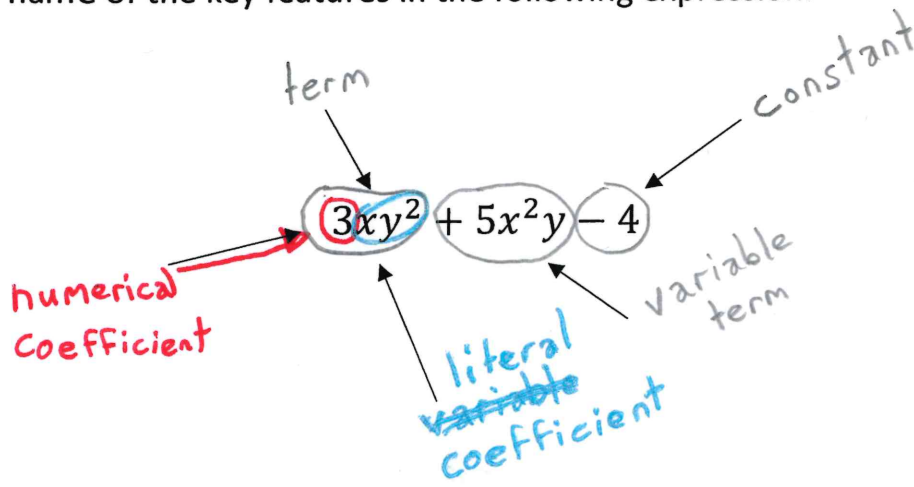


Review of Basic Algebra

State the name of the key features in the following expression:



Like Terms → terms that have the same literal coefficient.

Ex: $4xy^2$ and $-8xy^2$

$-3.5x^4$ and $28x^4$

Constants → terms that have no literal coefficient.

Ex: 8, 12, -58, -1.35

Simplifying → the mathematical procedure of reducing the number of terms and operations in an expression; usually involves combining like terms.

Distributive Law → a mathematical procedure used to multiply a single term by a polynomial in brackets.

Ex: Expand and simplify the following expressions using the distributive law.

a) $3x(2x^2 - 5y)$
 $= 6x^3 - 15xy$

b) $3(x + 2x^2) - x(4x - 1)$
 $= 3x + 6x^2 - 4x^2 + x$
 $= 2x^2 + 4x$

Practice

Use the distributive law to expand and simplify the following:

a) $(x - 3)(x + 8)$

$$= x^2 + \underline{8x} - \underline{3x} - 24$$

$$= x^2 + 5x - 24.$$

b) $(3x - y)(2x^2 + 3y - 4xy)$

$$6xy^2 - 3xy^2$$

$$= 6x^3 + 9xy - 12x^2y - 2x^2y - 3y^2 + 4xy^2$$

$$= 6x^3 - 14x^2y + 4xy^2 + 9xy - 3y^2$$

c) $(x + y + z)(2x - 3y + 5z)$

$$= 2x^2 - 3xy + 5xz + 2xy - 3y^2 + 5yz + 2xz - 3yz + 5z^2$$

$$= 2x^2 - 3y^2 + 5z^2 - xy + 7xz + 2yz$$

Homework: pg 88 #2, 3, 4ac, 5ac, 6ac, 8ac, 9, 11, 12, (17a)