

5.2 Equivalent Expressions

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- An algebraic expression is made up of terms
- each term can have any # of variables
- each variable has an exponent

<u>Expression</u>	<u>coefficient</u>	<u>variable(s)</u>	<u>degree</u>
$3w$	3	w	1
a^2	1	a	2
$-4xy$	-4	x, y	2
$-g$	-1	g	1

When simplifying algebraic expressions, you combine like terms

Like terms terms that have the same variable and differ only by their numerical coefficient

Ex #1

$$\begin{aligned} (a) \quad & \underline{1x^2} - \underline{2x} + \underline{5x} - \underline{3x^2} \\ & = \underline{1x^2 - 3x^2} - \underline{2x + 5x} \\ & = \boxed{-2x^2 + 3x} \end{aligned}$$

$$(b) \quad 2x^2 + 3x(-1) + x^2 - 4x(-2)$$

$$\begin{aligned} (b) \quad & \underline{2x^2} + \underline{3x}(-1) + \underline{x^2} - \underline{4x}(-2) \\ & = \underline{2x^2} + \underline{x^2} + \underline{3x - 4x} - \underline{1 - 2} \\ & = \boxed{3x^2 - 1x - 3} \end{aligned}$$

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