

5.1 The Language of Mathematics

MathLinks 9, pages 174–182

Key Ideas Review

Choose from the following terms to complete the statements in #1 to 3.

binomial
symbols

exponents
trinomial

highest
variables

monomial

polynomial

- Algebra uses _____, often letters, to represent unknown numbers or quantities. These unknown values are called _____.
- A _____ is made up of terms. Some of these expressions have special names, depending on the number of terms they have.
 - A _____ has one term.
 - A _____ has two terms.
 - A _____ has three terms.
- Each algebraic term has a degree, which you can find by adding the _____ of the variables in the term. A polynomial has the same degree as its _____-degree term.

Check Your Understanding

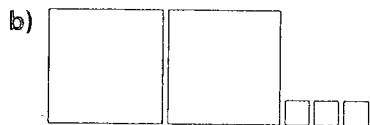
- For each expression, identify the number of terms and state whether it is a monomial, binomial, trinomial, or polynomial.
 - $2x - 5$
 - 10
 - $3z^2 - 6z + 7$
 - $b^2 - ab - 4d + e^2$
- For each expression, state the number of terms and the expression's degree.
 - $ef + gh$
 - $g^2 - 3g$
 - 10
 - $3s^2t - 2$

6. Refer to the following polynomials to answer the questions below.

$4c^2 - 3c + 2$	$4ab$
$2f - 4$	-12
$5p^2 - r$	$g + h + j$

Which of the above polynomials

- a) are trinomials?
 - b) have a degree of 2?
 - c) have a degree of 0?
 - d) are monomials?
 - e) have a coefficient of 4?
7. Write the expression represented by each set of algebra tiles. Shaded tiles are positive and white tiles are negative.



8. Sketch a model that represents the polynomial.

a) $x^2 + 3x - 2$

b) $-x^2 - 2x + 1$

9. Write an algebraic expression for each of the following:

a) the sum of 7 and x^2

b) the difference of $3x$ and 9

c) the product of x and 4

10. Use the given variables to write each statement as an algebraic expression.

a) If n is a number, the product of the number and 5

b) If w is the width of a rectangle and its length is 5 cm more than its width, the area of rectangle

c) If x is the number of kilometres, the cost of renting a car, in dollars, if the charge is \$40 plus \$0.80 per kilometre