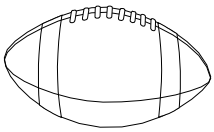
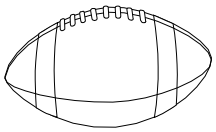


The Game of Algebra



Every game has its own special equipment. Football uses a ball and a playing field that are different from those of any other game. Chess has its special board, pieces, and pawns. In algebra, one of the most important pieces of equipment is...

The Algebraic Term

An **algebraic term** is a *product* of a number and variables. The numbers and letters that are multiplied together are called the *factors* of the term. The main parts of a term are:

The **coefficient**
$12 = 2 \times 2 \times 3$

$12\,a^2b$

The **variable(s)**
$a^2b = a \times a \times b$

Every algebraic term has a coefficient.
But if the coefficient is "1"
we usually do not write it.

Some algebraic terms don't have a variable part.
A plain number with no variables
is called a **constant term**.

Like terms

When the *variable part* of two or more terms *matches exactly*, they are called **like terms**.

Like terms can be added together to simplify your algebraic expression.

In football: 1 lineman + 2 linemen = 3 linemen

In algebra: $3a + 4a = 7a$

Unlike terms must be left separate.

In football: 3 linemen + 2 kickers do NOT make 5 "lickermen."

In algebra: $3a + 4ab$ cannot be written any simpler—it is just $3a + 4ab$.

To help us recognize like terms, we usually write the variables in alphabetical order. If you find an expression where the variables are out of order, rewrite it the proper way and look for like terms.

Several terms may be added together to make a special type of algebraic expression called a **polynomial**. Most of your time in algebra class will be spent learning to work with polynomials.

Vital Vocabulary

Knowing the correct words will help you think clearly!

Sum = the answer when you *add*.

Product = the answer when you *multiply*.

Quotient = the answer when you *divide*. Remember: In algebra, you divide by making a *fraction*.

Simplify = rewrite an expression as simply as possible. Be sure to combine all like terms and to put all fractions in lowest terms (simplest form).