Translating Words into Mathematical Symbols

English Phrase	Mathematical Phrase
The sum of a number n and 5	$n + 5$
4 more than a number n	$4 + n$
13 less than a number n	$n - 13$
A number n subtracted from 5	$5 - n$
A number n increased by 8	$n + 8$
A number n decreased by 8	$n - 8$
Twice the number n	$2n$
The sum of 4 times a number n and 7	$4n + 7$
The product of n and m	nm
A number n divided by 5	$n/5$
The sum of p and q less the sum of n and m	$(p + q) - (n + m)$
9 divided by the number n	$9/n$
The quotient of a number n and 6	$n/6$
The ratio of two numbers n and m	n/m
Miles per hour	miles/hour
10% of a number n	$0.10n$
The sum of x and y is 6	$x + y = 6$
The sum of x and y is 3 more than twice the product	$x + y = 3 + 2xy$
The square of a number n	n^2
The square root of a number n	$\sqrt{n}$
The absolute value of a number n	$|n|$
The absolute value of the difference between x and y	$|x - y|$

Common Vocabulary Used in Mathematics

sum	The result of adding numbers
difference	The result of subtracting numbers
terms	Quantities that are added or subtracted In the expression 2x + 3 – 5y, there are three terms: 2x, 3, and 5y.
product	The result of multiplying numbers
factors	Quantities that are multiplied In the expression 3m(a + b), there are two factors: 3m and (a + b).
factor	The word factor is used in a few different ways including the example above. "n is a factor of a number" means n divides exactly into the number. "To factor" means to write a number as the product of its factors.
multiple of n	A number that is exactly divisible by n
quotient	The result of dividing two numbers In the division x ÷ y = z, x is the **dividend**, y is the **divisor**, and z is the **quotient**.
ratio	The quotient of two numbers The ratio of a to b is a/b.
natural numbers	The set of numbers used for counting: {1, 2, 3, 4, 5,…}
whole numbers	The natural numbers and zero: {0, 1, 2 , 3, 4,…}
integers	The set: {…,-3, -2, -1, 0, 1, 2, 3,…}
rational numbers	The set of all numbers which can be represented as a fraction using integers
irrational numbers	The set of numbers with non-repeating, non-terminating decimals
real numbers	The set of rational and irrational numbers
variable	A symbol (usually a letter) which stands for a number
literal part of a term	Non-numerical part of a term (for example, in the term 3xy, xy is the literal part of the term and 3 is called the **coefficient**)
like terms	Terms with identical literal parts