Lesson 03: Algebra – Expressions and Equations

Algebra: Variables and Expressions

Vocabulary

Variable	Letters used to represent numbers
Expression	A meaningful collection of numbers, variables, and signs of operation

TRY: Complete the following algebraic expressions.

Written expressions that indicate **ADDITION**	Algebraic Expression	Written expressions that indicate **MULTIPLICATION**	Algebraic Expression
The sum of a number and 4	$x+4$	The product of 4 and a number	$4x$
Three is added to a number		Five times a number	$5x$
Five more than a number		Twice a number	
A number increased by six		Length times Width	$L \bullet W$
Length increased by 5	$L+5$	Rate times Time	
Written expressions that indicate **SUBTRACTION**	Algebraic Expression	Written expressions that indicate **DIVISION**	Algebraic Expression
Six less than a number	$x-6$	The quotient of 2 and a number	$\frac{2}{x}$
Two is subtracted from a number		A number divided by 7	$\frac{x}{7}$
The difference between 9 and a number	$9-x$	One-half the altitude	$\frac{1}{2}a$
Some number decreased by 4		A number divided by 8	
A number less 6	$x-6$	One-half the base	
Expressions with multiple operations			
The sum of 3 times a and b	3a + b	The quotient of a plus b and 6	$\frac{a+b}{6}$
The sum of 3 and a times b	3 + ab	Three times 4 more than a number	
Three times the sum of a and b	3(a+b)	Five more than twice the length	
The product of G and 5 less than G		Four times the sum of P and Q, divided by the difference P minus Q	

Note: Expressions do not contain the equal sign. Expressions must be meaningful.

8 - ÷ +7 is not an expression – it has no meaning.

8 ÷(-4) = x is not an expression. It is an equation.

Expressions of multiplication can be written in multiple ways.

R times T may be written: R·T RT (R)(T) R(T) R*T

All versions are correct and used in various textbooks.