1.3 Algebraic Expressions

Algebraic Expression – a mathematical statement that contains a variable.

ex: $3x - 5$

Algebraic Equation - a mathematical statement that two expressions are equal.

ex: $5 - 2x = 1$

Example (1): Write an algebraic expression for each statement.

a) Four more than a number

turn around word.

$4 + n$

$n + 4$

b) Seven times a number

$7 \times n$

$7n$

c) A number divided by 3

$n \div 3$

$\frac{n}{3}$

d) Six more than two times a number

$6 + 2 \times n$

$2n + 6$

e) Eight less than a number

$8 - n$

$n - 8$

Numerical Coefficient - a number by which a variable is multiplied.
For example: $4x+3$, 4 is the numerical coefficient.

Variable - a letter or symbol that represents a quanity.

Constant Term - - the number in an expression or equation that does not change.

ex: $4x+2$, 2 is the constant term.

Example (2): Complete the following table.

Algebraic Expression	Numerical Coefficient	Variable	Constant Term
7y + 3	7	y	3
2x	2	x	—
z + 10	1	z	10

3+7y

1z = z

1z + 10

1) ÷ x + −
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Example (3): Evaluate each expression by replacing x with 4.

a) $3x - 10$

$=3(4)-10$
$=12-10$
$=2$

b) $x + 2$

$=(4)+2$
$=6$

c) $\frac{24}{x}$

$=\frac{24}{(4)}$
$=6$

d) $9 - 2x$

$=9-2(4)$
$=9-8$
$=1$