

SECTION

1A

Ready to Go On? Skills Intervention

1-5 Evaluating Algebraic Expressions

Letters, called **variables**, may be used to represent numbers whose values can vary. Numbers whose values do not change are called **constants**. **Algebraic expressions** include variables, constants, and operations. When a specific value is assigned to a variable, the expression can be **evaluated**, or given a single value that is equal to the whole expression.

Vocabulary

variable
constant
algebraic expression
evaluate

Evaluating an Algebraic Expression for Different Values of a Variable

Evaluate $x - 6$ for $x = 12$.

$x - 6$

___ - 6

What do you substitute for x ?

Subtract.

Evaluating Algebraic Expressions Involving Order of Operations

Evaluate each algebraic expression for the given variable values.

A. $9 + 4m$ for $m = 3$

$9 + 4(\underline{\quad})$

What do you substitute for m ?

$9 + \underline{\quad}$

Multiply.

Add.

B. $2x^2 - 3x + 4$ for $x = 5$

$2(\underline{\quad})^2 - 3(\underline{\quad}) + 4$

What do you substitute for x ?

$2(\underline{\quad}) - 3(5) + 4$

Evaluate the power.

$\underline{\quad} - \underline{\quad} + 4$

Do you multiply or add next?

$\underline{\quad} + 4$

Subtract.

Add.

Evaluating Expressions With More Than One Variable

Evaluate the algebraic expression for the given variable values.

$\frac{8}{m} - 2n + 5$ for $m = 2$ and $n = 1$

$\frac{8}{(\underline{\quad})} - 2n + 5$

What do you substitute for m ?

$\frac{8}{2} - 2(\underline{\quad}) + 5$

What do you substitute for n ?

$\frac{8}{2} - 2(1) + 5$

Remember the order of operations.

$\underline{\quad} - \underline{\quad} + 5$

Divide and multiply from left to right.

Add and subtract from left to right.