

1.1: Evaluate Expressions

Goals: *Evaluate algebraic expressions using basic operations
*Evaluate algebraic expressions using exponents

Variable:

Algebraic Expression:

****IMPORTANT****

Examples of Algebraic Expressions

Ex:

Ex:

Ex:

To simplify an algebraic expression:

1.

2.

Evaluate the expressions below when $n = 3$.

Ex: $13n$

Ex: $\frac{9}{n}$

Ex: $n - 1$

Evaluate the expressions below when $y = 2$.

Ex: $6y$

Ex: $y + 4$

Ex: $11 - y$

Evaluate the expressions below when $c = 4$.

Ex: $4c$

Ex: $\frac{8}{c}$

Ex: $15 + c$

Ex: The total cost of going to the movies can be represented by the expression $a + r$, where a is the cost of admission and r is the cost of refreshments. Suppose you pay \$7.50 for admission and \$7.25 for refreshments, find the total cost of going to the movies.

Exponents

Power:

Ex: $3^4 =$ $=$

Say in words and write out as multiplication:

Ex: $5^2 =$

Ex: $\left(\frac{1}{2}\right)^3 =$

Ex: $7^1 =$

Ex: $x^5 =$

Evaluate the expressions for the given values.

Ex: $x^4, x = 2$

Ex: $n^3, n = 1.5$

Ex: $y^5, y = 3$

Ex: $x^3, x = 8$

Ex: $k^2, k = 2.5$

Ex: $d^4, d = \frac{1}{3}$

Here are some trickier ones:

Ex: -3^2

Ex: x^2 , when $x = -2$

Ex: $-x^2$ when $x = 4$

Ex: -5^2

Ex: x^2 , when $x = -6$

Ex: $-x^2$ when $x = 7$

Ex: The edge of a medium-size storage cube is 14 inches long. Find the volume of the storage cube.

Ex: Find the area of a square garden whose side length is 22 feet.