1.2 Order of Operations

Evaluate- To find the value of an expression

Example 1.

Evaluate 2^6

Order of operations

Step 1. Evaluate expressions inside grouping symbols

Step2. Evaluate all powers

Step 3. Multiply and/or divide from left to right.

Step 4. Add and/or subtract from left to right

Example 2. Evaluate

$48 \div 2^3 \bullet 3 + 5$

Example 3. Evaluate each expression

A. $(8-3) \bullet 3(3+2)$

B. $4\left[12 \div (6-2)\right]^2$

C. $\dfrac{2^5 - 6 \bullet 2}{3^3 - 5 \bullet 3 - 2}$

To evaluate an algebraic expression, replace the variables with their values, and then find the value of the numerical expression.

Examples 4.

Evaluate $2(x^2 - y) + z^2$ if x = 4, y = 3, and z = 2.