Order of Operations

$$(3+2)^2 - 4 \cdot 6 = 2^3$$

1. First do operations under the grouping symbols.
   (), {}, []
2. Then evaluate exponents.
3. Then do multiplication and division, left to right.
4. FInally do addition and subtraction left to right.

Fraction bars can act as grouping symbols

PEMDAS

P: arenthesis

E: xponents

M: ultiplication

D: ivision

A: ddition

S: ubtraction

When doing multiplication, division, addition, and subtraction work from Left to Right.

Example 1

$6 \div (3 - 1) \cdot 5$

$6 \div (2) \cdot 5$

$3 \cdot 5$

15

Example 2:

$16 \div 2 \cdot 6 - 1$

$8 \cdot 6 - 1$

$48 - 1$

$\boxed{47}$

Example 3:

$2^2(2 + 3) + 5$

$2^2(5)+5$

$4 \cdot 5+5$

$20+5$

$\boxed{25}$

Word Problems

Brenda is buying some items from the store. She has a list, and while she is shopping, she writes the cost of the items on her list.

2 gallons of milk - $2.85 each

1 loaf of bread - $1.55 each

3 packages of sandwich meat - $2.25 each

4 tomatoes – 4 for $1

Which of the following expressions could be used to find the total cost of the items? Circle all that apply.

A. 2.85 + 2.85 + 1.55 + 2.25 + 2.25 + 2.25 + 1.00

B. 2(2.85) + 1.55 + 3(2.25) + 1.00

C. 2(2.85 + 1.55) + 3(2.25 + 1.00)

D. 2 2.85 + 1.55 + 3 2.25 + 1.00