

1.2

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6:43 AM

1.2 Order of Operations



: Use the order of operations to evaluate expressions.

Parentheses

Exponents

Multiplication

Division

Addition

Subtraction

$$13 + 3 - 8$$

$$\begin{array}{r} 1) \ 13 - 8 + 3 \\ \quad 5 + 3 \\ \quad \quad 8 \end{array}$$

Evaluate the following expressions.

$$\begin{array}{r} 2) \ 8 - 6 \div 2 \\ \quad 8 - 3 \\ \quad \quad 5 \end{array}$$

$$\begin{array}{r} 3) \ 10 - 3 \div 3 \times 2 \\ \quad 10 - 1 \times 2 \\ \quad 10 - 2 \\ \quad \quad 8 \end{array}$$

$$4) \ 3 \cdot 6 - 4$$

$$\begin{array}{r} 18 - 4 \\ 14 \end{array}$$

$$5) \ 48 \div 4^2 + (5 - 3)^2$$

$$\begin{array}{r} 48 \div 4^2 + (2)^2 \\ 48 \div 16 + 4 \\ 3 + 4 \\ 7 \end{array}$$

$$6) \ 2^4 \cdot 4 - 8 \div 2$$

$$\begin{array}{r} 16 \cdot 4 - 8 \div 2 \\ 64 - 8 \div 2 \\ 64 - 4 \\ 60 \end{array}$$

$$7) \ [3(8 - 2^2)] \div 6$$

$$\begin{array}{r} (3(8 - 4)) \div 6 \\ (3(4)) \div 6 \\ 12 \div 6 \\ 2 \end{array}$$

$$8) \ 2[(9 + 3)^2 \div 6]$$

$$9) \ 9 \times 4^2 \div 2$$

$$10) \ [(15 - 10) + 3^2] \div 2$$

$$\begin{array}{r} (5 + 3^2) \div 2 \\ (5 + 9) \div 2 \\ 14 \div 2 \\ 7 \end{array}$$

$$11) \ \frac{2 + 5 \cdot 2}{16 \div 4 - 2} = \frac{2 + 10}{4 - 2}$$

$$= \frac{12}{2}$$

$$= 6$$

$$12) \ 27 \div 3^2 \times 2 - 3$$

Word Problems

The regular shopping fee (in dollars) for an online computer store is given by the expression $0.5w + 4.49$ where w is the weight (in pounds) of the item. The fee (in dollars) for rush delivery is given by $0.99w + 6.49$. You purchase a 26.5 pound computer. How much do you save using regular shipping instead of rush delivery?

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$$.5(26.5) + 4.49$$

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$$.99(26.5) + 6.49$$

\$14.99

Order of Ops CHALLENGE!

1.
$$\frac{(9 - 5)^2 + 2}{(8 - 7)^2 \cdot 3^2}$$

2.
$$\frac{9(3 \div 3) + 4(5 \cdot 9) \div 3}{6^2 \div [5^2 - (4^2 - 3)]}$$

3.
$$\frac{7^2 - (12 - 3^2)^2}{[4^2 - (5 - 3)]^2}$$

You can do it!!!

