

Order of Operations

- Parentheses
- Exponents
- Multiplication
- Division
- Addition
- Subtraction

Follow the "Order of Operations" in the order shown on the left, starting with the parentheses.

Note: If the expression only contains addition and subtraction or multiplication and division, then evaluate the expression from left to right.

1. Evaluate each expression.

a) $16 - 4 \cdot 3 =$

$$16 - 12 = \boxed{4}$$

b) $30 - 16 \div 8 + 14 =$

$$\begin{aligned} & 30 - 2 + 14 \\ & 28 + 14 = \boxed{42} \end{aligned}$$

c) $32 \div 4 \cdot 6 =$

$$8 \cdot 6 = \boxed{48}$$

d) $3 \cdot 4^2 - 100 \div 20 =$

$$\begin{aligned} & 3 \cdot 16 - 100 \div 20 \\ & 48 - 5 = \boxed{43} \end{aligned}$$

e) $11^2 + 8 \cdot 5 - 12 \cdot 6 =$

$$\begin{aligned} & 121 + 8 \cdot 5 - 12 \cdot 6 \\ & 121 + 40 - 72 \\ & 161 - 72 = \boxed{89} \end{aligned}$$

f) $4(5+20) - 12 \div 3 =$

$$\begin{aligned} & 4 \cdot 25 - 12 \div 3 \\ & 100 - 4 = \boxed{96} \end{aligned}$$

$$g) 6(9-4) - 6^2 \div 3 + 1 =$$

$$6 \cdot 5 - 6^2 \div 3 + 1$$

$$6 \cdot 5 - 36 \div 3 + 1$$

$$30 - 12 + 1$$

$$18 + 1 = \boxed{19}$$

$$h) 4^2 \cdot 2 + (54 - 32 + 11) - 6 =$$

$$22 + 11$$

$$33$$

$$4^2 \cdot 2 + 33 - 6$$

$$16 \cdot 2 + 33 - 6$$

$$32 + 33 - 6$$

$$65 - 6 = \boxed{59}$$

$$i) 2[4(5 \cdot 2 + 1) + 6] - 20 =$$

$$[4(5 \cdot 2 + 1) + 6]$$

$$10 + 1$$

11

$$[4 \cdot 11 + 6]$$

$$[44 + 6]$$

$$2[50] - 20$$

$$2 \cdot 50 - 20$$

$$100 - 20 = \boxed{80}$$

$$j) 5 \cdot 3^2 - [24 \div (6 - 4)] =$$

$$[24 \div (6 - 4)]$$

$$[24 \div 2]$$

$$[12]$$

$$5 \cdot 3^2 - 12$$

$$5 \cdot 9 - 12$$

$$45 - 12 = \boxed{33}$$

$$k) 5[(8 \div 2 \cdot 3 + 6) - 5] + 9 =$$

$$[(8 \div 2 \cdot 3 + 6) - 5]$$

$$4 \cdot 3$$

$$12 + 6 = 18$$

$$[18 - 5]$$

$$[13]$$

$$5 \cdot 13 + 9$$

$$65 + 9 = \boxed{74}$$

$$l) \{ [12 + (4 - 3) \cdot 2] \div 7 \} + 8^2 =$$

$$[12 + 1 \cdot 2]$$

$$[12 + 2]$$

$$[14]$$

$$\{ 14 \div 7 \}$$

$$2 + 8^2$$

$$2 + 64 = \boxed{66}$$