

Order of Operations

EXAMPLE

Calculate.

$$\begin{aligned}
 & 16 + (-24) \div [3^2 + (5)(-1) \div (-8 \div 2 + 9)] + 9 \\
 = & 16 + (-24) \div [3^2 + (5)(-1) \div (-4 + 9)] + 9 \\
 = & 16 + (-24) \div [3^2 + (5)(-1) \div 5] + 9 \\
 = & 16 + (-24) \div [9 + (5)(-1) \div 5] + 9 \\
 = & 16 + (-24) \div [9 + (-5) \div 5] + 9 \\
 = & 16 + (-24) \div [9 + (-1)] + 9 \\
 = & 16 + (-24) \div [8] + 9 \\
 = & 16 + (-3) + 9 \\
 = & 13 + 9 \\
 = & 22
 \end{aligned}$$

1. Calculate.

a. $56 + 8 \div [14 \div (-7) + (-4)(-1)]$

b. $-(-4)^2 + (-4)^2$

c. $[-5 + (-3)(-2)(-1)^8(2)]$

d. $2^5 \div (-16) \times 4 - (-2)$

e. $\frac{[3 + (-5)(-2)]^2 + (8)(-3)}{17 - (-3)(-2) - (-2)^4}$

f. $\frac{[56 + (-2)] - (-9) + (-6)^2}{3[17 + 50(-2) + 72]}$

g. $[(35)(-2)(-1) \div (-2)(-5)]^2$

h. $[4(4 - 8 + 6) - 5(10 - 1 - 9)]^2$

2. Calculate.

a. $\frac{-6 + 8(-3) - 10}{8(-5)} + \frac{12 - 3(-4)}{3 - 11}$

b. $\frac{8(-4) + (-6)(-2)}{-2(2 + 3)} - \frac{5(-3) - 6(1)}{(-4 - 3)}$

c. $\frac{-5 + (-3)(-8)}{-(-8)(-3) + 5} + \frac{10 - 5 + 1}{-9 + 3}$

d. $\frac{-8 + (2)(-1)}{-2(-1)} + \frac{-8(-5)}{2(-1)}$

e. $\frac{80 \div 8 \times 3}{(-5) \times 2} - \frac{3 - 5}{-2}$

3. Calculate.

a. $-(-3)^2(2)^5(-1)^9$

b. $-(-1)^6 + (-5)^3$

c. $(-4 + 2 - 8)^4 + (-9 - 2)^2$

d. $[(-4)(-1) + 8(-3)]^3$

e. $-2^4 + (-2)^4 - 2^4$

f. $3^3 - (-3)^3 + (-3)^3$

g. $2^3 - (-2)^4 + (-2 - 1)^2$

h. $(8 - 3^2 + 2^3)^3 - 3^4$

4. Calculate.

a. $-20 + 3[-2 + (-5)(-2)] - (-3)^2$

b. $(16 + 2) - (-2 - 1)^2(8 - 5^2)$

c. $(-8 + 3 - 2 + 9)^3 - (-3 + 5)^4$

d. $-30 - (-3)[(-2)^2(3) - 5(6)^2]$

e. $-72 \div (-8)(-3^2) + 3 - 3(5)$

f. $2^5 - 5^2 + 3^2 - 2^2$

g. $(8 - 3)^2 - (2 - 5)^3 + 8^2 \div (-16)$

h. $0^3 - 0^5 + 1^5 - 1^3 - 5^3 + 5$