

1.2 order of operations

P	E	M	D	A	S
()	x^2	\cdot	\div	+	-

EX: Evaluate each expression.

$$\begin{aligned} \text{A. } 8 - 6 \cdot 4 \div 3 \\ 8 - 24 \div 3 \\ 8 - 8 \\ \boxed{0} \end{aligned}$$

$$\begin{aligned} \text{B. } 32 + 7^2 - 5 \cdot 2 \\ 32 + 49 - 5 \cdot 2 \\ 32 + 49 - 10 \\ 81 - 10 \\ \boxed{71} \end{aligned}$$

EX: Evaluate each expression.

$$\begin{aligned} \text{A. } 45 \left[(1+1)^3 \div 4 \right] \\ 45 \left[2^3 \div 4 \right] \\ 45 \left[8 \div 4 \right] \\ 45 \left[2 \right] = \boxed{90} \end{aligned}$$

$$\text{B. } \frac{6^2 - 8}{4(3+7)} = \frac{28}{40} = \boxed{\frac{7}{10}}$$

$$\begin{array}{l} \text{TOP: } 6^2 - 8 \\ 36 - 8 \\ 28 \end{array} \quad \begin{array}{l} \text{BOTTOM: } 4(3+7) \\ 4(10) \\ 40 \end{array}$$

EX: Evaluate $x(y^3 + 8) \div 12$ if $x=3$ and $y=4$.

$$\begin{aligned} 3(4^3 + 8) \div 12 \\ 3(64 + 8) \div 12 \\ 3(72) \div 12 \\ 216 \div 12 \\ \boxed{18} \end{aligned}$$