

1.2 Order of Operations

PEMDAS

P arentthesis

E xponents

M ultiplication

D ivision

A dd

S ubtract

P
E
M D }
A S } Left to right

Evaluate the expression.

Ex. 1) $27 \div 3^2 \cdot 2 - 3$

$$\underline{27 \div 9 \cdot 2 - 3}$$

$$\underline{3 \cdot 2 - 3}$$

$$6 - 3$$

$$\boxed{3}$$

Ex. 2) $20 - 4^2$

Ex. 3) $2 \cdot 3^2 + 4$

Ex. 4) $32 \div 2^3 + 6$

$$\underline{32 \div 8 + 6}$$

$$4 + 6$$

$$\boxed{10}$$

Ex. 5) $15 + 6^2 - 4$

Ex. 6) $24 \div (4 - 1)$

Ex. 7) $48 - (6 + 5^2)$

$$48 - (6 + 25)$$

$$48 - 31$$

$$\boxed{17}$$

Ex. 8) $7(3 - 8)$

$$7(-5)$$

$$\boxed{-35}$$

Ex. 9) $24 - (3^2 + 1)$

Ex. 10) $2[30 - (8 + 13)]$

$$2(\underline{30 - 21})$$

$$2(9)$$

$$\boxed{18}$$

Ex. 11) $3[32 \div (2 + 6)]$

Evaluate when $x = 4$.

Ex. 1) $\frac{9x}{3(x+2)}$

$$\frac{9(4)}{3(4+2)} \rightarrow \frac{36}{18}$$
$$\frac{36}{3(6)} \rightarrow \boxed{2}$$

Ex. 2) $x^2 - 3$

Ex. 3) $12 - x - 1$

Ex. 4) $\frac{10x+10}{x+1}$

Homework: