

Order of Operations: ① Grouping Symbols $() [] \{ \}$
 ② Exponents 4^2 3^5
 ③ Multiply OR Divide $\xrightarrow{\text{Left to Right}}$
 ④ Add OR Subtract $\xrightarrow{\text{Left to Right}}$

Evaluate.

$$\begin{aligned} \text{Ex. 1: } & 2[3 - 4(1 - 3)^2] \\ & 2[3 - 4(-2)^2] \quad -2 \cdot -2 \\ & 2[3 - 4(4)] \\ & 2[3 - 16] \\ & 2[-13] = (-26) \end{aligned}$$

$$\begin{aligned} \text{Ex. 2: } & 3(5 + 6) - 4(3) \\ & 3(11) - 12 \\ & 33 - 12 \\ & \boxed{21} \end{aligned}$$

$$\begin{aligned} \text{Ex. 3: } & \frac{2(5 - 6)^2 + 8}{8 - 7 + 4} = \frac{2(-1)^2 + 8}{1 + 4} \\ & \quad \quad \quad -1 \cdot -1 \\ & \quad \quad \quad 2(1) + 8 \\ & \quad \quad \quad 2 + 8 \\ & \quad \quad \quad \frac{10}{5} = 2 \end{aligned}$$

$$\begin{aligned} \text{Ex. 4: } & (4)(-5) - (2)(-13) \\ & \quad \quad \uparrow \quad \quad \uparrow \quad \quad \uparrow \\ & -20 + 26 \\ & \quad \quad \quad \boxed{6} \end{aligned}$$

$$\text{Ex. 5: } \frac{(-2)(5) - (-6)}{-34 - 2(-9)}$$

Sec 1 H

Order of Operations & Solving Equations

Steps for Solving Equations:

- ① Draw a line down the =
- ② Circle the variable
- ③ use inverse operations
- ④ $x = \#$

Ex. 6: $2x - 7 = 5$

Ex. 7: $-6 + 4y = -10$

Ex. 8: $-5(x + 2) = 20$

Ex. 9: $\frac{y+7}{2} = 21 \cdot 2$

$$\begin{array}{r|l} y+7 & = 42 \\ -7 & -7 \\ \hline y & = 35 \end{array}$$

Ex. 10: $23 - (-d) = 4$

Ex. 11: $5e + 8 = 7e - 10$

$$\begin{array}{r|l} 5e+8 & = 7e-10 \\ -5e & -5e \\ \hline 8 & = 2e-10 \\ +10 & +10 \\ \hline 18 & = 2e \\ \frac{18}{2} & = \frac{2e}{2} \\ 9 & = e \end{array}$$

Ex. 12: $2(5x + 4) = 7x - 4$