

Wednesday Oct 7m

Simplifying Algebraic Expressions

$$\begin{array}{l} \underline{\text{ex}} \quad a + a \\ \quad \quad 2a \end{array} \qquad \begin{array}{l} \underline{\text{ex}} \quad 3a + a \\ \quad \quad 4a \end{array}$$

$$\underline{\text{ex}} \quad 3a^3 + 2a^2 + a$$

$$\begin{array}{l} \underline{\text{ex \#1}} \quad (2a + 4) + (5a + 6) \\ \quad \quad = 2a + 4 + 5a + 6 \\ \quad \quad = 7a + 10 \end{array}$$

$$\begin{array}{l} \underline{\text{ex \#2}} \quad 1(5x - 3) + 1(2x + 4) \\ \quad \quad = 5x - 3 + 2x + 4 \\ \quad \quad = 7x + 1 \end{array}$$

Steps for Adding with Brackets

Step #1 - Simplify Brackets (if we can)

Step #2 - Remove the brackets (nothing change)

Step #3 - Combine like terms

Subtracting with Brackets

$$\begin{aligned} \underline{\text{ex}} \quad & 1(5x-2) - 1(3x+1) \\ & = 5x-2 \quad \underline{-3x-1} \\ & = 2x-3 \end{aligned} \quad \left. \vphantom{\begin{aligned} & 1(5x-2) - 1(3x+1) \\ & = 5x-2 \quad \underline{-3x-1} \\ & = 2x-3 \end{aligned}} \right\} \begin{array}{l} \text{the signs} \\ \text{have changed} \end{array}$$

$$\begin{aligned} \underline{\text{ex}} \quad & 1(2x+1) - 1(-4x-2) \\ & = 2x+1+4x+2 \\ & = 6x+3 \end{aligned}$$

$$\begin{aligned} \underline{\text{ex}} \quad & (a+1) - (2a-3) \\ & = a+1-2a+3 \\ & = -a+4 \end{aligned}$$

$$\begin{aligned} \underline{\text{ex}} \quad & -(2a-1) - (-3a+4) \\ & = -2a+1+3a-4 \\ & = a-3 \end{aligned}$$

Step #1 - Check brackets

Step #2 - When there is a neg outside the bracket all signs in the bracket change
(neg \rightarrow pos, pos \rightarrow neg)

Step #3 - combine like terms

H/w m3000 p85 #8&9