

$$a.) \quad -40 + (-80) = -120$$

$$-40 + (-40) + (-40) = -120$$

$$b.) \quad 3(-40)$$

$$\begin{array}{l} + \cdot + = + \\ - \cdot - = + \end{array} \left. \vphantom{\begin{array}{l} + \cdot + = + \\ - \cdot - = + \end{array}} \right\} \begin{array}{l} \text{Same signs} \\ \text{answer is positive} \end{array}$$
$$\begin{array}{l} + \cdot - = - \\ - \cdot + = - \end{array} \left. \vphantom{\begin{array}{l} + \cdot - = - \\ - \cdot + = - \end{array}} \right\} \begin{array}{l} \text{different signs} \\ \text{answer is negative} \end{array}$$

Associative Prop.

$$-4(12) - 5$$
$$-48(-5)$$
$$240$$

Commutative Prop.

$$-4(12) - 5$$
$$20(12)$$
$$240$$

$$\begin{array}{l} -7(9)(-6) \\ -63(-6) \\ 378 \end{array}$$

$$\begin{array}{l} -7(9)(-6) \\ \quad \quad \quad \searrow \swarrow \\ 42(9) \\ 378 \end{array}$$

$$-7a(4b)$$

$$\left. \begin{array}{l} -7 \\ 4 \end{array} \right\} \text{constant}$$

Like terms
 parts of the algebra
 expression that are exactly
 alike: { Same variable
 both constants
 same exponent

$$\left. \begin{array}{l} a \\ b \end{array} \right\} \text{variables}$$

you can then do any operation on these #'s

$$\begin{array}{l} -\underline{7}a(\underline{4}b) \\ 28ab \end{array}$$

$$\begin{array}{l} -3(6y) \\ -18y \end{array}$$

$$\begin{array}{l} -9x(3y) \\ -27xy \end{array}$$

Simplify

$$28. \quad \underline{3}r(\underline{7}s)(\underline{5}t)$$

$$105rst$$

$$3a(4a)$$
$$12a^2$$

$$3a + 4a \quad a=3$$
$$7a = 7(3) = 21$$

$$3(3) + 4(3)$$
$$9 + 12$$
$$21$$

2-4 Multiplying Integers
#12 - 42 evens
and
#54