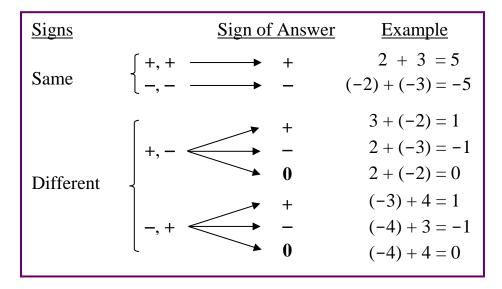
### Gaining Math Momentum

### **Issues with Integers? Self-Help Guide!**

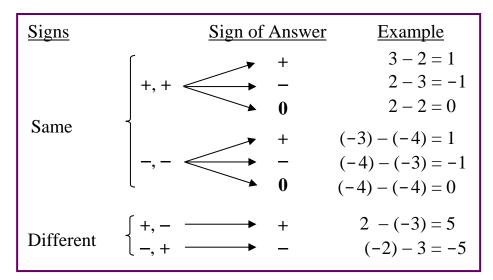
## **SUMMARY OF INTEGER OPERATIONS:**

Shown below is a summary of the results acquired through the investigation of operations between integers contained within previous guides, freely offered to address any areas of weakness. This summary is NOT a substitute for understanding and should NOT be used as a list of rules to be memorized. Without understanding, rules are meaningless and are quickly forgotten, once again leaving a gap in these essential math skills. Generalizing the findings of an investigation is a process used by mathematicians throughout history and is a necessary skill for today's math students.

#### **ADDITION**



#### **SUBTRACTION**



# **Gaining Math Momentum**

# **Issues with Integers? Self-Help Guide!**

# **MULTIPLICATION**

Signs	Sign of Answer	<u>Example</u>
Same	{ +, +	$3 \cdot 4 = 12$ $(-3) \cdot (-4) = 12$
Different	{ +, −	$3 \cdot (-4) = -12$ $(-3) \cdot 4 = -12$

## **DIVISION**

<u>Signs</u>	Sign of Answer Example
Same	$\begin{cases} +, + & \longrightarrow & + \\ -, - & \longrightarrow & + \end{cases} $
Different	$\begin{cases} +, - & \longrightarrow & - \\ -, + & \longrightarrow & - \end{cases}$ $12 \div (-4) = -3$ $(-12) \div 4 = -3$

Additional Note: Division by zero is undefined.