

3. Identity Elements: Let $*$ represent any whole number operation. For which operations ($+$, $-$, \cdot , \div) will the property hold? What is the identity element ($\#$) for each operation?

$$\mathbf{a * (\#) = (\#) * a = a}$$

4. The Distributive Property:

A. Multiplication over Addition: For any whole numbers x , y , z :
 $\mathbf{x(y + z) = xy + xz.}$ (See page 143 for array diagram)

B. Multiplication over Subtraction: For any whole numbers a , y , z :
 $\mathbf{x(y - z) = xy - xz.}$

5. Multiplication Property of Zero

$N \times 0 = 0 \times n = 0$ for all whole numbers n .