

# *reliable* **Inverse Property of Multiplication** (multiplicative inverse)

**Property**  
 $a \cdot \frac{1}{a} = 1$  where  $a \neq 0$

$\frac{a}{b} \cdot \frac{b}{a} = 1$  where denominator  $\neq 0$

**Example**  
 $\frac{3}{5} \cdot \frac{5}{3} = \frac{15}{15} = 1$

$\frac{12}{10} \cdot \frac{10}{12} = 1$

## **Multiplication Property of Zero**

**Property**  
 $a \cdot 0 = 0$

**Example**  
 $5 \times 0 = 0$

|                                                     | Problem                                                             | Rewrite             | Property | Solution |
|-----------------------------------------------------|---------------------------------------------------------------------|---------------------|----------|----------|
| 1.                                                  | $8 + 76 + 92 =$                                                     | $8 + (76 + 92)$     |          |          |
| 2.                                                  | $(20)(17)(5) =$                                                     |                     |          |          |
| 3.                                                  | $2 \cdot (3 \cdot 63) =$                                            | $2 \cdot 189 = 378$ |          |          |
| 4.                                                  | $17 + 0 =$                                                          |                     |          |          |
| 5.                                                  | $12(10 + 3) =$                                                      |                     |          |          |
| 6.                                                  | $64(1) =$                                                           |                     |          |          |
| 7.                                                  | $17(0) =$                                                           |                     |          |          |
| 8.                                                  | $183 + (17 + 654) =$                                                |                     |          |          |
| 9.                                                  | $156 + 219 + 44 =$                                                  |                     |          |          |
| 10.                                                 | $0 + 32 =$                                                          |                     |          |          |
| Fill in the blanks using the distributive property. |                                                                     |                     |          |          |
| 11.                                                 | $5(9 + 7) =$                                                        |                     |          |          |
| 12.                                                 | $4(3 + \underline{\hspace{1cm}}) =$                                 |                     |          |          |
| 13.                                                 | $\underline{\hspace{1cm}}(5 + 7) = 10 +$                            |                     |          |          |
| 14.                                                 | $6(\underline{\hspace{1cm}} + 8) = 24 +$                            |                     |          |          |
| 15.                                                 | $8(2 + \underline{\hspace{1cm}}) =$                                 |                     |          |          |
| 16.                                                 | $\underline{\hspace{1cm}}( \underline{\hspace{1cm}} + 8) = 80 + 90$ |                     |          |          |