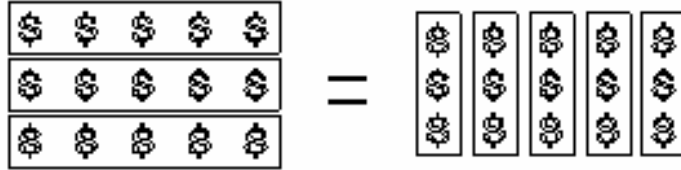


## MULTIPLICATION PROPERTIES

**FACT 1: Two numbers may be multiplied in any order (Commutative Property).**

3 rows of 5 dollars each = 5 columns of 3 dollars each



$$5 + 5 + 5 = 3 + 3 + 3 + 3 + 3$$

Or, 
$$5 \times 3 = 3 \times 5$$

**FACT 2: Multiply by using the Commutative and Associative Properties.**

$$7 \times 30 = 7 \times 3 \times 10 = 21 \times 10 = 210$$

$$40 \times 60 = 4 \times 10 \times 6 \times 10 = 4 \times 6 \times 10 \times 10 = 2400$$

**FACT 3: Multiplying by using the Distributive Property.**

$$13 \times 4 = (10 + 3) \times 4 = 40 + 12 = 52$$

$$25 \times 6 = (20 + 5) \times 6 = 120 + 30 = 150$$

$$57 \times 3 = (50 + 7) \times 3 = 150 + 21 = 171$$

**1. Multiply the following using the Associative and Commutative Properties.**

- |                    |                    |                        |
|--------------------|--------------------|------------------------|
| (a) $6 \times 30$  | (d) $17 \times 30$ | (g) $40 \times 40$     |
| (b) $30 \times 50$ | (e) $90 \times 20$ | (h) $500 \times 20$    |
| (c) $20 \times 80$ | (f) $3 \times 330$ | (i) $3000 \times 4000$ |

*(Check your answers on a calculator).*

**2. Multiply the following using the Distributive Property.**

- |                   |                   |                   |
|-------------------|-------------------|-------------------|
| (a) $14 \times 3$ | (g) $5 \times 39$ | (m) $3 \times 77$ |
| (b) $7 \times 23$ | (h) $8 \times 47$ | (n) $8 \times 53$ |
| (c) $17 \times 6$ | (i) $7 \times 58$ | (o) $4 \times 93$ |
| (d) $4 \times 35$ | (j) $9 \times 23$ | (p) $2 \times 67$ |
| (e) $83 \times 2$ | (k) $6 \times 68$ | (q) $6 \times 34$ |
| (f) $3 \times 38$ | (l) $2 \times 59$ | (r) $5 \times 88$ |

*(Check your answers on a calculator).*

**3. Write the multiplication table for the numbers 1 to 20 once again. See if you can do it faster now.**

**End of Lesson**