

## Multiplying by Powers of 10...

WHAT HAPPENS?!

$$5 \times 6 = 30$$

$$5 \times 60 = 300$$

$$6 \times 5 = 30$$

$$6 \times 50 = 300$$

Think:  $5 \times 6 \times 10$

$$5 \times 6 = 30 \times 10 = 300$$

$$3 \times 4 = 12$$

$$30 \times 4 = 120$$

$$3 \times 4 = 12$$

$$3 \times 40 = 120$$

Think:  $\frac{30}{10} \times 4 = \frac{3 \times 10}{10} \times 4 = 120$

Equal

\*Zeros Follow to the Answer.\*

$$8 \times 6 = 48$$

$$8 \times 60 = 480$$

$$6 \times 8 = 48$$

$$6 \times 80 = 480$$

$$6 \times 800 = 4800$$

$$6 \times 8,000 = 48,000$$

Think:  $8 \times 6 \times 10 = 48 \times 10 = 480$

### \* Whole Numbers

10, 100, 1,000 Move the decimal point to the **RIGHT** for every **ZERO** seen.

### Patterns in Multiplying

$$47.63 \times 100 = 4,763$$

$$47.63 \times 10 = 476.3$$

$$47.63 \times 1 = 47.63$$

$$47.63 \times 0.1 = 4.763$$

$$47.63 \times 0.01 = 0.4763$$

$$47.63 \times 0.001 = 0.04763$$

$$10^2 = 10 \times 10 = 100$$

$$10^3 = 10 \times 10 \times 10 = 1,000$$

$$10^4 = 10 \times 10 \times 10 \times 10 = 10,000$$

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