

## Multiply or Divide by 10, 100, 1000, etc.

### Mental Math Strategy

**When to use this strategy:** Use this strategy when multiplying or dividing by a power of 10.

**How to use this strategy:** To use this strategy move the decimal point by the number of zeros. Multiplying makes it *bigger*, so move to the right (add zeros as needed). Dividing makes it *smaller*, so move to the left (remove zeros as needed).

*Examples:*  $63 \times 100 = 6300$  (2 places to the right)    $532 \div 10 = 53.2$  (1 place to the left)    $4.65 \times 1000 = 4650$

Use this (new) strategy on the following:	
1.) Simplify $785.3 \times \frac{1}{100}$	2.) At a charity event, a table of ten people each donate \$15.75. How much money was donated at the table?
3.) Solve for $x$ , $1000x = 963.2$	4.) $m$ = number of cell phone minutes used, $C$ = monthly cell phone bill, in dollars, $C = .037m + 5$ Find the cell phone bill if 1000 minutes are used.

Use any strategy you know on the following:	
5.) Simplify $6302 \times 1000$	6.) Express $1.214 \times 10^5$ in standard notation.
7.) Ten friends placed the same amount of money into a \$482.30 poker pot. How much did one friend contribute?	8.) $n$ = number of gallons $T$ = total cost, in dollars $T = 8 + 2.6n$ Ted used 10 gallons last month, calculate his cost.