

4-01 Multiplying Decimals by Whole Numbers

4-02 Multiplying Decimals with Decimals

**SOL Standard 6.22:** The student will **investigate and describe concepts of positive exponents**, perfect squares, square roots, and, for numbers greater than 10, scientific notation. Calculators will be used to developed exponential patterns.

## Multiplying by 2-digit numbers

When multiplying a number by a 2-digit number think about multiplying by ones and then by the tens.

$$\begin{array}{r} 3.5 \\ \times 1.7 \\ \hline 245 \\ +350 \\ \hline 5.95 \end{array}$$

Step 1: Multiply by the ones digit  
Regroup if needed.  
Add the regrouped tens

Step 2: Put a zero in the ones place  
Because you are actually multiplying by tens  
Multiply by the ten's digit  
Regroup if needed.

Step 3: Add the products and regroup if needed.

Step 4: Determine how many digits are behind the decimal(s). Count over from right to left that many spaces.