Unit G Sections 6 and 7 Helpful Hints

Multiplying Decimals

When multiplying decimals, the decimal points do not have to be aligned. Rather, it is important to accurately position the decimal point in the product. To position the decimal in the product, the total number of digits to the right of the decimals in the numbers being multiplied must be equal to the number of digits to the right of the decimal in the product. This is best illustrated in the following examples:

Step 1: Multiply numbers without inserting decimal in the products.
Step 2: Sum the number of digits to the right of the decimal in all of the numbers being multiplied.
Step 3: Position the decimal in the product so the number of digits to the right of the decimal equals the total number of digits to the right of the decimal in the numbers multiplied (from Step 2).

Example:

0.056 x 0.032 =

$$\begin{array}{r} 0.056 \\ \times\ 0.032 \\ \hline 112 \\ 168 \\ \hline 0.001792 \end{array}$$

Dividing Decimals

When solving problems involving division of decimals, the following procedure should be applied.

Step 1: Write out the division problem.
Step 2: Move the decimal in the divisor to the right.
Step 3: Move the decimal in the dividend the same number of places to the right. Add zeros after the decimal in the dividend if necessary.
Step 4: Place the decimal point in the quotient directly above the decimal in the dividend.
Step 5: Divide the numbers.

Example:

3.00 ÷ 0.06

Step 1: $.06\overline{)3.00}$

Step 2: $.06\overline{)3.00}$

Step 3: $6.\overline{)300.}$

Step 4: $6.\overline{)300.}$

Step 5:
$$\begin{array}{r} 50. \\ 6\overline{)300.} \\ \underline{30} \\ 00 \end{array}$$