

Name: Key

5<sup>th</sup> Grade Notes 6.3&5 Multiply Decimals by Whole Numbers and Decimals p. 391

To multiply decimals:

1. line up the numbers on the right side, NOT by place value - put the longer number (most digits) on top
2. ignore the decimal point and multiply normally (vertically)
3. count the number of places after (to the right) of the decimal point of both numbers in the original problem
4. that is the number of places after the decimal point in the answer (start counting from the right)
5. add zeros to the left if necessary
6. write the answer separately and circle it
7. check for reasonableness by rounding decimals to the nearest whole number (whole numbers stay the same)

Ex:  $3.62 \times 4$  longer # (more digits) goes on top

$$\begin{array}{r} 3.62 \\ \times 4 \\ \hline 14.48 \end{array}$$

← lined up on right  
← 2 places after dec.pt.  
← 0 places  
← 2 places total; start from right, put dec. pt. two places over  
← circle answer

Ex:  $.5 \times 6$

$$\begin{array}{r} .5 \leftarrow \text{one place} \\ \times 6 \\ \hline 3.0 \leftarrow \text{one place} \\ \text{\textcircled{3}} \leftarrow \text{drop zero after dec. pt.} \end{array}$$

Ex:  $.75 \times 2.1$

$$\begin{array}{r} .75 \leftarrow 2 \text{ places} = 3 \text{ places total} \\ \times 2.1 \leftarrow 1 \text{ place} \\ \hline 75 \leftarrow \text{don't put dec. or commas here} \\ + 1500 \\ \hline 1.575 \leftarrow 3 \text{ places} \end{array}$$

Ex:  $.5 \times .06$

$$\begin{array}{r} .06 \leftarrow 2 \text{ places} \\ \times .5 \leftarrow 1 \text{ place} \\ \hline .030 \\ \text{\textcircled{.03}} \leftarrow \text{fill in a zero to make 3 places} \\ \text{Keep zero in between,} \\ \text{drop end zero} \end{array}$$