Steps to Divide Decimals

1. W.O.P.
2. Set up problem in long division format.
3. If dividend does not contain a decimal point, place one at the end.
4. If divisor has a decimal point do the following
   a. Move decimal point all the way to the right and show your move with a different color.
   b. Move the decimal point in the dividend the same amount and show your move with a different color.
   c. Add zeros in dividend, if necessary, when moving decimal point.
   d. Write another problem in long division format without all of the arrows and with the decimal points in their new positions.
5. Copy the decimal point directly above in quotient area.
6. Divide as usual. The decimal point is now in the quotient and you can ignore all other decimal points during division.
7. Do not use a remainder in decimal division. If there is a remainder, insert zeros in the original dividend at end of the dividend.
8. Continue to divide until number goes in evenly, or enough to do rounding to a particular place. If the answer is a repeating decimal, then stop.

Example: $4.6 \div 0.24$

- Set up problem in long division format. Our problem has a decimal point in the dividend so we do not need to insert one.

$$0.24\overline{)\,4.6}$$

- We see that .24, the divisor, has a decimal point. Move the decimal point two places to the end (see **red arrows**). Do the same move in the dividend and insert a zero (see **green zero**).

$$0.24.\overline{)\,4.60.}$$

- Make a new problem without all of the arrows and the decimal points in their new positions.

$$24.\overline{)\,460.}$$

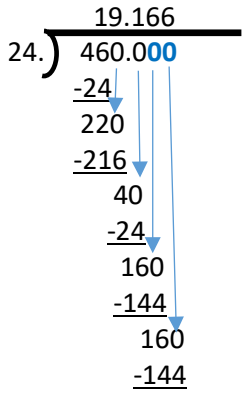
- Copy the decimal directly above to the quotient area (see **blue arrow**).

$$\begin{array}{r} \\ \hline 24.\overline{)\,460.} \end{array}$$

- Start dividing and there is a remainder of four. Keep dividing, by inserting a zero (see **blue zero**). Bring down the zero and continue to divide. There is now a new remainder.

$$\begin{array}{r} 19.1 \\ \hline 24.\overline{)\,460.0} \\ \underline{-24} \\ 220 \\ \underline{-216} \\ 40 \\ \underline{-24} \\ 16 \end{array}$$

- Insert more zeros (see **blue zeros**) and continue division. The problem repeats with 6's.



- Since the problem repeats, we rewrite the digit or block of digits that repeats with a bar over it. The final step would look like:

$$19.\overline{6}$$