

Operations With Decimals

Fractions to Decimals (use long division)

Divisor 16.952 ← Quotient The decimals line up
356 → 21 | 356.0000 ← Dividend Keep adding zeros

$$\begin{array}{r} 16.952 \\ 21) 356.0000 \\ \underline{-21} \quad : \quad : \quad : \\ 146 \quad : \quad : \quad : \\ 126 \quad : \quad : \quad : \\ \underline{-200} \quad : \quad : \quad : \\ 189 \quad : \quad : \quad : \\ \underline{-110} \quad : \quad : \quad : \\ 105 \quad : \quad : \quad : \\ \underline{-50} \quad : \quad : \quad : \\ 42 \quad : \quad : \quad : \\ \underline{-80} \quad : \quad : \quad : \\ \end{array}$$

begins repeating

16.95238095
21) 356.00000000

So to change $\frac{1}{4}$ into a decimal number, divide 1 by 4

$$\begin{array}{r} .25 \\ 4) 1.00 \\ \underline{-8} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

To divide by a decimal, move the decimal in the divisor to the right of the number. Move the decimal in the dividend to the right the same number of digits as the divisor.

$$1.5) 9.0 \Rightarrow 15. \overline{) 90.0} \quad \begin{matrix} 6.0 \\ \hline 90 \\ 0 \end{matrix}$$

To change a decimal number into a fraction:

(Remember the value of the numbers after the decimal:
.1 = tenths, .01 = hundredths, .001 = thousandths, etc.)

So if you have one number after the decimal, write it over ten.

$$0.2 = \frac{2}{10} = \frac{1}{5} \text{ reduced}$$

If you have two numbers after the decimal, write it over one hundred.

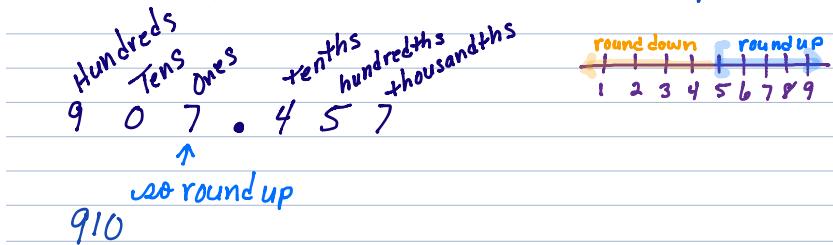
$$0.25 = \frac{25}{100} = \frac{1}{4} \text{ reduced}$$

To change a decimal to a percent, multiply the decimal by 100 or "move the decimal point 2 places to the right."

$$.25(100) = 25.00\% \quad \text{or } \underline{.25} = 25\%$$

Rounding

Round 907.45 to the nearest tens place



Round 907.457 to the nearest integer

907

round down

↑
round up

907.5