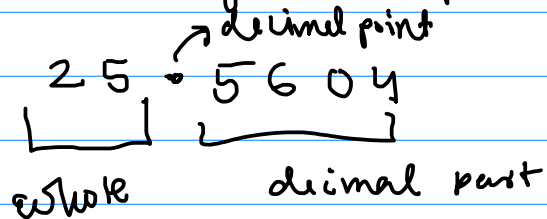


## Decimals part 2

- Decimals are numbers which are part of whole numbers

and is another way to represent fraction

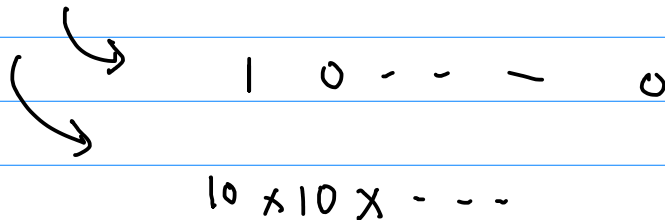


- 2,562.62435  
Thousands      hundreds      tens      ones      tenths      hundredths

## Fractions into decimals

usually, in fractions, we want the denominator to be power of 10.

power of 10 =  $10 \times 10 \times 10 \times 10 \dots$   
10, 100, 1,000, 10,000, ...



$\frac{a}{b}$   
a → numerator  
b → denominator

$$\frac{\textcircled{25}}{1000} = 0.025$$

2 digits

$$\frac{1122}{1000} = 1.122$$

3 digits

$$\frac{22242}{10000} = 2.2242$$

4 digits

2 digit

$$\frac{25}{1000} = \frac{025}{1000} = 0.025$$

3

$$\frac{1}{100} = \frac{01}{100} = 0.01$$

$$\frac{10}{10000} =$$

$$\frac{0010}{10000} = 0.0010$$

4 digits  
4 zero

Competition

Convert into decimals

①  $\frac{12}{100} = 0.12$

②  $\frac{25}{10} = 2.5$

③  $\frac{4}{20} = \frac{2}{10} = 0.2$

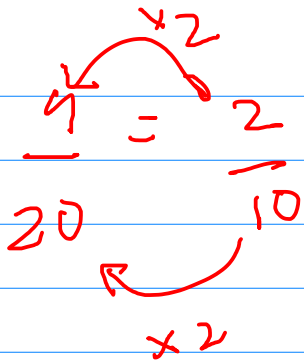
④  $\frac{200}{10000} = 0.0200$   
 $= 0.02$

⑤  $\frac{100}{10000} = \frac{1}{100} = 0.01$

⑥  $\frac{25}{1000} = 0.025$

⑦  $\frac{1}{1000} = 0.001$

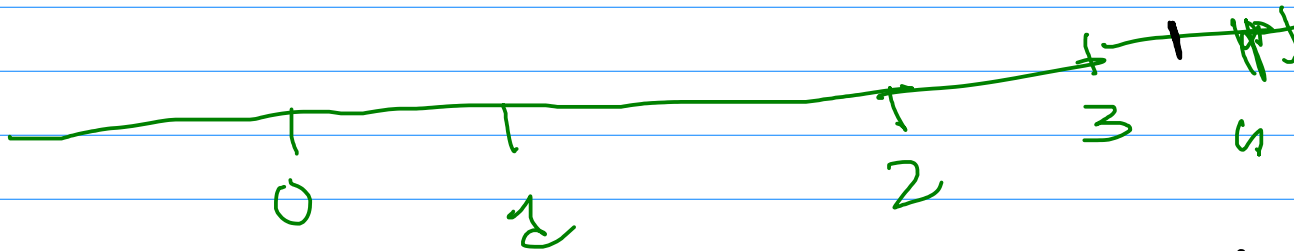
$0.0200$   
 $= 0.02$



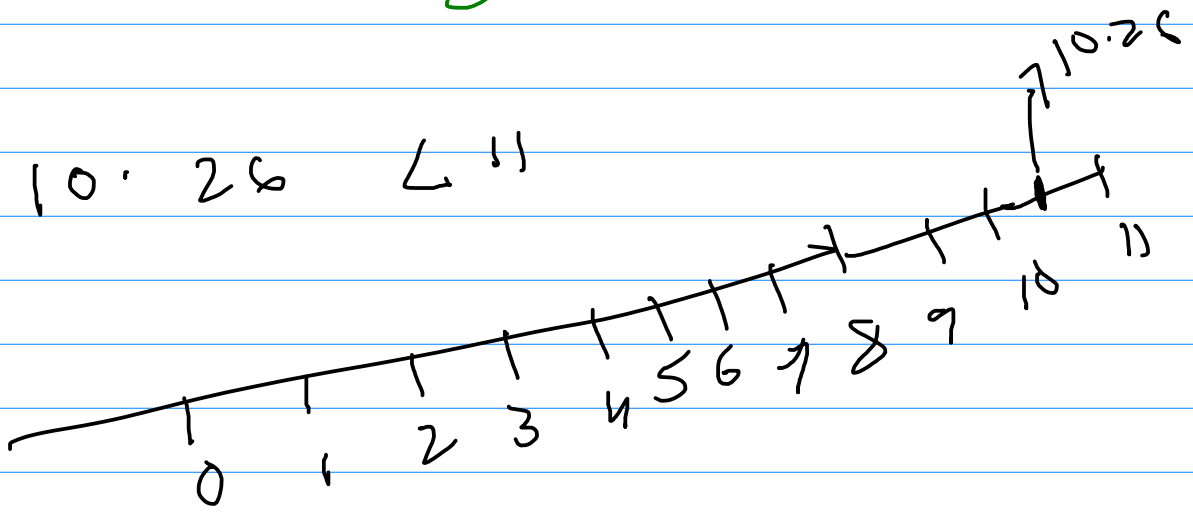
$$\frac{4}{20} \times \frac{5}{5} = \frac{20}{100} = 0.20 = 0.2$$

Decimal representation

3.48  
 ↘ tenths  
 ↗ hundredths



102 10.26 11



$$\begin{array}{r} 0.01 \\ \times 2 \\ \hline 0.02 \end{array}$$

$$\begin{aligned}
 &= 1 \times 10 + 0 \times 1 + 2 \times 0.1 + 6 \times 0.01 \\
 10.26 &= 10 + 0.2 + 0.06 \\
 &= \frac{10}{1} + \frac{2}{10} + \frac{6}{100}
 \end{aligned}$$

10 → tens      2 → tenths      6 → hundredths

## Competition

Expand decimal numbers

$$1) \quad 10.56 = 10 + 0.5 + 0.06$$

$$2) \quad 22.45 = 20 + 2 + 0.4 + 0.05$$

$$3) \quad 23.042 = 20 + 3 + 0.04 + 0.002$$

$$4) \quad 202.115 = 200 + 2 + 0.1 + 0.01 + 0.005$$

$$10.56 = 10 + 0.5 + 0.06$$

$$= 1 \times 10 + 0 \times 1 + 5 \times 0.1 + 6 \times 0.01$$

$$= \frac{10}{1} + \frac{5}{10} + \frac{6}{100}$$

$$= \frac{10}{1} + 5 \times \frac{1}{10} + 6 \times \frac{1}{100}$$

$$\begin{aligned} 0.05 \\ = 00.05 \end{aligned}$$

$$22.45 = 22 + 0.4 + 0.05$$

$$= 22 + 0.4 + 0.05$$

$$= \frac{22}{1} + \frac{4}{10} + \frac{5}{100} = \frac{22}{1} + 4 \times \frac{1}{10} + 5 \times \frac{1}{100}$$

$$0.1 = 0 + 0.1 = 0 + \frac{1}{10}$$

$$1.1 = 1 + 0.1 = 1 + \frac{1}{10}$$

$$1.25 = 1 + 0.2 + 0.05 = 1 + \frac{2}{10} + \frac{5}{100}$$

$$= 1 + 2 \times \frac{1}{10} + 5 \times \frac{1}{100}$$