5.1 Relating Fractions, Decimals and Percents

Friday, November 13, 2015   12:19 PM
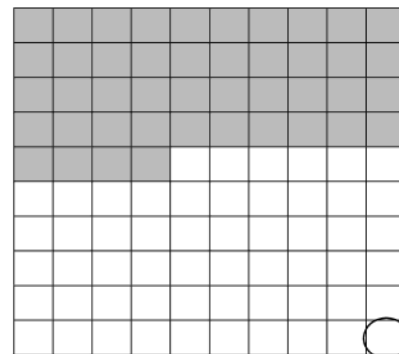
To write a fraction as a percent, we first write the fraction with a denominator that is a power of __1 0__ such as __10__ , __100__ , __1000__ or __10000__

Some fractions cannot be written this was so......

We can use a __hundredths__ chart to represent one whole, or 100%.
Each small square represents __1__%.

You can describe the shaded part of a whole in 3 ways:
- As a __fraction__
- As a __decimal__
- As a __percent__

There are 44 squares shaded in 100 squares.

So, 44% of the squares are shaded.
* **(Remember percent means per hundred)** *

As a decimal: $\dfrac{44}{100} = 0.44$ $\dfrac{25}{100} = 0.25$ $\dfrac{3}{100} = 0.03$

As a fraction: $\dfrac{44 \div 4}{100 \div 4}$ Since the decimal has 2 digits after the decimal point.

$\dfrac{11}{25}$ Reduce to simplest form by dividing by the GCF.

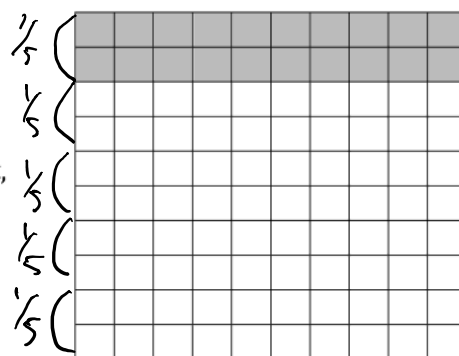We can use a __thousandths__ chart to represent 1%.

Each small square represents $\dfrac{1}{100}$ of 1%, or __0.01__%.

To represent $\dfrac{1}{5}$ of 1%, or $\dfrac{1}{5}$ % on the hundredths chart,
shade $\dfrac{1}{5}$ of the chart, which is __20__ squares.

Since one small square is 0.01%, then 20 small squares
is __0.20__% or __0.2__%.

You can write this percent as a decimal.

$0.2\% = \dfrac{0.2^{\times 10}}{100_{\times 10}} = \dfrac{2}{1000} = 0.002$

Try These:

Write each percent as a fraction and a decimal. Using denominators with powers of 10 $\frac{1}{4} = 0.25$

1. $7\% = \dfrac{7}{100}$

$= 0.07$

2. $7.75\% = \dfrac{7.75}{100}$

$= \dfrac{775}{10000} = \boxed{\dfrac{31}{400}}$

$= \boxed{0.0775}$

3. $7\frac{1}{4}\% = 7.25\%$

$= \dfrac{7.25}{100}$

$= \dfrac{725}{10000} \overset{\div 25}{\underset{\div 25}{=}} \boxed{\dfrac{29}{400}}$

$= \boxed{0.0725}$

Write each fraction as a decimal and as a percent.   you try

a) $\dfrac{5}{8} = 5 \div 8$

$= 0.625$

$= \dfrac{625 \div 10}{1000 \div 10}$

$= \dfrac{62.5}{100}$

$: \dfrac{0.625 \times 1000}{1 \times 1000}$

$= 62.5\%$

b) $\dfrac{5}{6} = 0.8\overline{3}$ repeating

$= \dfrac{83.\overline{3}}{100}$

$= 83.\overline{3}\%$

c) $\dfrac{5}{1000} = 0.005$

$= \dfrac{0.5}{100}$

$= 0.5\%$

Assignment p. 239-241   use a calculator

#6-9, 10, 12-14, 16, 19, 21

HW check next class