

Date

KEY

8.2 Fractions, Decimals, and Percents

Write the following percents as a fraction and as a decimal:

34% $= \boxed{0.34}$ $= \frac{34}{100} = \frac{17}{50}$	$\frac{3}{4}\%$ $= 0.75\%$ $= \boxed{0.0075}$ $= \frac{75}{10000} = \frac{3}{400}$	$53\frac{1}{4}\%$ 53.25% $= \boxed{0.5325}$ $= \frac{5325}{10000}$	$= \frac{1065}{2000}$ $= \frac{213}{400}$
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*** FRACTIONS, DECIMALS, and PERCENTS can be used to represent numbers in various situation.

REMEMBER:

Percent is something out of one hundred!

In order to make a fraction into a decimal, convert the denominator into 100

ex: $\frac{1}{5} = \frac{20}{100}$

(Handwritten arrows show 1 multiplied by 20 to get 20, and 5 multiplied by 20 to get 100)

Convert each fraction to a decimal and a percent:

a. $\frac{2}{5} = \frac{4}{10}$ decimal: 0.4

percent: 40%

b. $\frac{7}{5} = \frac{14}{10}$ decimal: 1.4

percent: 140%

To convert Decimals to Percents:

MULTIPLY BY

100

(OR MOVE THE DECIMAL TWO PLACES RIGHT)

To convert Decimals to Fractions:

① READ THE DECIMAL PROPERLY
i.e. "TENTHS," "HUNDRETHS"

② EXPRESS AS A FRACTION

③ REDUCE TO LOWEST TERMS.

Convert the following decimals to a percent and a fraction:

a. 0.36

$$\begin{aligned} &\xrightarrow{\times 100} \frac{36}{100} \\ &= \boxed{36\%} \\ &= \frac{18}{50} \\ &= \boxed{\frac{9}{25}} \end{aligned}$$

b. 4.75

$$\begin{aligned} &\xrightarrow{\times 100} \frac{475}{100} \\ &= \boxed{475\%} \\ &= \frac{95}{20} \\ &= \boxed{\frac{19}{4}} \end{aligned}$$

To convert Percents to Fractions:

- ① EXPRESS OVER 100
- ② REDUCE

To convert Percents to Decimals:

DIVIDE BY 100
(OR MOVE THE DECIMAL TWO PLACES LEFT)

Convert the following percents into a fraction and a decimal:

a. 160%

$$\begin{aligned} &= \frac{160}{100} \\ &= \frac{16}{10} \\ &= \boxed{\frac{8}{5}} \leftarrow \text{FRACTION} \\ &= \boxed{1.6} \leftarrow \text{DECIMAL} \end{aligned}$$

b. $25\frac{3}{5}\%$

$$\begin{aligned} &= 25.6\% \\ &= \frac{25.6}{100} \\ &= \frac{256}{1000} \\ &= \frac{128}{500} \end{aligned}$$

BECAUSE $\frac{3}{5} = 0.6$

$$\begin{aligned} &= \frac{64}{250} \\ &= \boxed{\frac{32}{125}} \leftarrow \text{FRACTION} \\ &= \boxed{0.256} \leftarrow \text{DECIMAL} \end{aligned}$$

Example:

Jorje participated in the National Hot Dog Eating Competition. During the competition 1600 hot dogs were consumed. Jorje ate 212 hot dogs. What percentage did he consume? What is this percentage as a decimal and as a fraction?

$$\begin{aligned} &\frac{212}{1600} \\ &= \boxed{0.1325} \leftarrow \text{DECIMAL} \\ &\xrightarrow{\times 100} \\ &= \boxed{13.25\%} \leftarrow \text{PERCENT} \end{aligned}$$

FRACTION:

$$\begin{aligned} &\frac{212}{1600} \\ &= \frac{106}{800} \\ &= \boxed{\frac{53}{400}} \leftarrow \text{FRACTION} \end{aligned}$$