

NOTES (Conversions)

Name _____

No calculator(fraction/decimal/%)

Given a fraction, change it to a percent.

Example:

$\frac{3}{10}$ → Think “how many parts out of 100 ?”

$$\frac{3}{10} = \frac{\boxed{3} \times 10}{\boxed{10} \times 10} \quad \boxed{3} = 30 \quad \longrightarrow \quad 30 \%$$

$\frac{5}{10}$ → Think “Can the fraction be put in lowest terms?”
 $\frac{5}{10} = \frac{1}{2} \longrightarrow 50 \%$

$\frac{1}{4}$ → Think “Do I have this one memorized?”
25 %

$\frac{37}{100}$ → Think “ There’s no work to this one - The number on top of the 100 is the percent 37 %”

PRACTICE Change these fractions to percents .

$\frac{13}{100} =$	$\frac{8}{25} =$	$\frac{3}{20} =$
$\frac{1}{5} =$	$\frac{2}{3} =$	$\frac{8}{32} =$
$\frac{9}{10} =$	$\frac{6}{8} =$	$\frac{9}{50} =$
$\frac{11}{20} =$	$\frac{6}{10} =$	$\frac{8}{16} =$

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Given a decimal, change it to a percent.

EXAMPLE

.14 = Think "How do I read this without the word point?"
14 hundredths $\rightarrow \frac{14}{100}$
Whatever number is "out of 100" is the percent
14 %
Some people think "Move the decimal point 2
places to the right" $\overset{\curvearrowright}{.14} \rightarrow 14. \rightarrow 14 \%$

.3 = Think "How can I make this out of 100?"
.3 = .30 \rightarrow see above example $\rightarrow 30 \%$

1.2 = Think " I need 2 decimal places 1.2 \rightarrow 1.20"
1.20 \rightarrow see first example $\rightarrow 120 \%$

.125 = Think "The percent is the number in the first two
places after the decimal. Anything after that is a
decimal part of the percent" Think 12 %
Then think 12.5 %
See first example "Move decimal point two places
to the right" $\overset{\curvearrowright}{.125} \rightarrow 12.5 \rightarrow 12.5 \%$

PRACTICE Change these decimals to percents.

1) .1 =

2) .47 =

3) .7 =

4) .375 =

5) 1.25 =

6) .23 =

7) 1.5 =

8) .9 =

9) .8 =

Given a percent, change it to a fraction (in lowest terms).

EXAMPLES:

4 % = Think "4 hundredths" Write the fraction and put in lowest terms. $\frac{4}{100} \xrightarrow{\div 4} \frac{1}{25}$

150 % = Think "150 hundredths" $\rightarrow \frac{150}{100} \xrightarrow{\div 50} \frac{3}{2}$

Given a decimal, change it to a fraction (in lowest terms).

EXAMPLES:

.4 = Think 4 tenths $\rightarrow \frac{4}{10} \xrightarrow{\div 2} \frac{2}{5}$

.35 = Think 35 hundredths $\rightarrow \frac{35}{100} \xrightarrow{\div 5} \frac{7}{20}$

2.5 = Think 2 and 5 tenths $\rightarrow 2\frac{5}{10} \xrightarrow{\div 5} 2\frac{1}{2} \rightarrow \frac{5}{2}$
Change to an improper fraction

Practice: Change these to fractions in lowest terms.

1) 24 % =

2) .6 =

3) 5 % =

4) 45 % =

5) .12 =

6) .08 =

7) 125 % =

8) 1.5 =

9) 80 % =

Given a percent, change it as a decimal.

EXAMPLES: Remember decimal place names!



29 % Think "29 hundredths" .__ __ → .29

2 % Think "2 hundredths" .__ __ → .02

125 % Think "125 hundredths" __ .__ __ → 1.25

Some people think "Move the decimal point two places to the left. 34% → ~~34.~~ → .34

1.5 % Think "1.5 hundredths" $\frac{1.5 \times 10}{100 \times 10} \rightarrow \frac{15}{1000} \rightarrow .015$

Practice: Write these percents as decimals.

1) 3 %

2) 14 %

3) 25 %

4) 175 %

5) 40 %

6) 78 %

7) 2.5 %

8) 9 %

9) 85 %

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Given a fraction, write it as a decimal

EXAMPLES:

$\frac{3}{10} = .3$ $\frac{3}{100} = .03$ $\frac{3}{1000} = .003$ Think “ decimal places”

$\frac{4}{25}$ Think “ Can I make the denominator 100 easily?”

“Is the denominator a 5,10,20,25,50 ?”

$$\frac{4}{25} = \frac{x4}{x4} \frac{\boxed{}}{100} \longrightarrow \frac{16}{100} \longrightarrow .16$$

$\frac{1}{8}$ Think “ Last resort is LONG DIVISION”

$$8 \overline{)1} \longrightarrow 8 \overline{)1.000} \begin{array}{r} .125 \\ \hline \end{array}$$

Practice: Write these fractions as decimals.

1) $\frac{6}{100}$

2) $\frac{3}{5}$

3) $\frac{7}{10}$

4) $\frac{13}{50}$

5) $\frac{5}{9}$

6) $\frac{7}{8}$

7) $\frac{19}{100}$

8) $\frac{3}{4}$

9) $\frac{1}{5}$

Complete the chart.

Name _____

Fraction (in lowest terms)	Decimal	Percent
$\frac{1}{4}$		
		20 %
	.4	
		6 %
$\frac{9}{10}$		
	1.2	
$\frac{3}{5}$		
		35 %
	.06	
$\frac{11}{50}$		
		150 %
$\frac{7}{25}$		