

Friday 22<sup>nd</sup> May 2020

WALT: Convert percentages and decimals to fractions

## Percent to fraction

Percent can be thought of as a ratio with a base of 100. Ratios can be written as fractions. So to convert a percent to a fraction we make the numerator on the top the percent value and make the denominator at the bottom 100. This fraction can often be simplified as shown in the example below.

Write 35% as a fraction.	
The numerator is the percent value and the denominator is 100	$\frac{35}{100}$
We can simplify by dividing top and bottom by the greatest common factor.	$\frac{35 \div 5}{100 \div 5} = \frac{7}{20}$

**Convert these percentages to fractions and cancel the fractions down to their simplest forms:**

- |                |                |                |
|----------------|----------------|----------------|
| 1) 2% = _____  | 2) 8% = _____  | 3) 50% = _____ |
| 4) 10% = _____ | 5) 25% = _____ | 6) 75% = _____ |
| 7) 5% = _____  | 8) 20% = _____ | 9) 40% = _____ |

## Converting a decimal to a fraction

Decimals are fractions that have powers of ten as their denominators. Or, to say another way, they have 10, 100, 1000, and so on as the bottom number of the fraction.

The main thing when we convert from decimal to common fractions is to find out what we are dealing with. Is it tenths? Is it hundredths? Or is it thousandths?

The examples below show decimals can be shown as common fractions.

We write as a decimal	decimal point	tenths	hundredths	thousandths	We read, or say	We write as a common fraction
.3	.	3			three tenths	$\frac{3}{10}$
.7	.	7			<b>seven tenths</b>	$\frac{7}{10}$
.23	.	2	3		<b>twenty-three hundredths</b>	$\frac{23}{100}$
.61	.	6	1		<b>sixty-one hundredths</b>	$\frac{61}{100}$
.597	.	5	9	7	<b>five hundred ninety-seven thousandths</b>	$\frac{597}{1000}$
.439	.	4	3	9	<b>four hundred thirty-nine thousandths</b>	$\frac{439}{1000}$

The place value of the number on the right tells whether the common fraction is in tenths, hundredths, thousandths, and so on.

Try these (you don't have to simplify)

Write the decimals as common fractions (the first one is done for you).

Decimal	Common Fraction	Decimal	Common Fraction
.3	$\frac{3}{10}$	.33	_____
.5	_____	.57	_____
.1	_____	.9	_____
.13	_____	.09	_____

### Answers

Convert these percentages to fractions and cancel the fractions down to their simplest forms:

- |               |              |              |
|---------------|--------------|--------------|
| 1) 2% = 1/50  | 2) 8% = 2/25 | 3) 50% = 1/2 |
| 4) 10% = 1/10 | 5) 25% = 1/4 | 6) 75% = 3/4 |
| 7) 5% = 1/20  | 8) 20% = 1/5 | 9) 40% = 2/5 |

Write the decimals as common fractions (the first one is done for you).

Decimal	Common Fraction	Decimal	Common Fraction
.3	$\frac{3}{10}$	.33	$\frac{33}{100}$
.5	$\frac{5}{10}$	.57	$\frac{57}{100}$
.1	$\frac{1}{10}$	.9	$\frac{9}{10}$
.13	$\frac{13}{100}$	.09	$\frac{9}{100}$