Converting between Fractions, Decimals and Percentages

Lesson 3: Converting Fractions to Decimals and Percentages

Learning Objective

To develop an understanding of how to convert fractions to decimals and percentages.

Targeting Assessment Objective: AO1

Success Criteria

- To divide numbers using the bus stop method.

- To convert a fraction to a decimal.

- To convert a fraction to a percentage.

Conversion Grid

Convert each percentage to a decimal and cross off the answer on the grid. There will be 4 decimals at the end which will not have been crossed off. Add these together to find the final answer.

Percentages: 88%, 12.5%, 10.2%, 10%, 50%, 1%, 52.5%, 2%, 24%, 17%, 94%, 19.9%, 5%, 15%, 75%, 14.4%

0.88	0.10	0.075	0.01
0.94	0.50	0.05	0.001
0.24	0.17	1.25	0.144
0.75	0.904	0.02	0.102
0.525	0.125	0.199	0.15

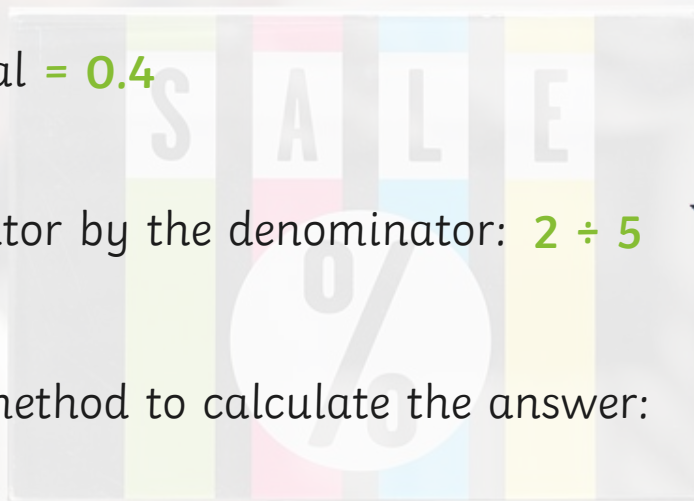**Answer:** 0.904 + 0.075 + 0.001 + 1.25 = **2.23**

Converting Fractions to Decimals

To convert a fraction to decimal, we divide
the numerator by the denominator.

Convert $\frac{3}{4}$ to a decimal **= 0.75**

1. Divide the numerator by the denominator: **3 ÷ 4**

2. Use the bus stop method to calculate the answer:

$$4\overline{)\,3.^30^20} = 0.75$$

Converting Fractions to Decimals

To convert a fraction to decimal, we divide
the numerator by the denominator.

Convert $\frac{2}{5}$ to a decimal **= 0.4**

1. Divide the numerator by the denominator: **2 ÷ 5**

2. Use the bus stop method to calculate the answer:

$$\begin{array}{r} 0.4 \\ \hline 5 \,\big|\, 2.^{2}0 \end{array}$$

Converting Fractions to Decimals

Convert each fraction to a decimal.

1. $\frac{1}{5}$ **0.2 or 0.20**

2. $\frac{1}{8}$ **0.125**

3. $\frac{1}{4}$ **0.25**

4. $\frac{2}{20}$ **0.1 or 0.10**

5. $\frac{5}{8}$ **0.625**

F.D.P. Grid

F.D.P. Grid

		What we know		
What we want to find out		Fraction	Decimal	Percentage
	Fraction			
	Decimal	Divide numerator by denominator		Divide by 100
	Percentage		Multiply by 100	

Maths

visit twinkl.com

twinkl
Quality Standard
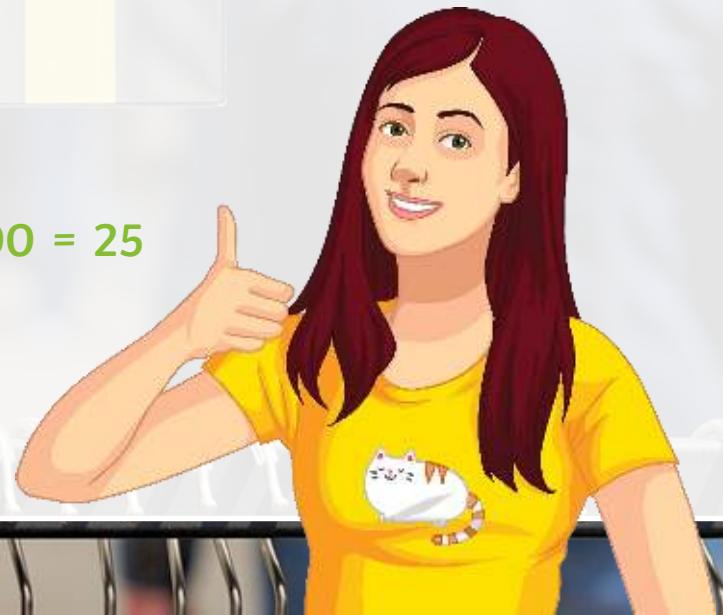Approved ✓

Converting Fractions to Percentages

To convert a fraction to a percentage, we must first convert the fraction to a decimal:

Convert $\frac{3}{5}$ to a decimal **= 60%**

1. Divide the numerator by the denominator: **3 ÷ 5**

2. Use the bus stop method to calculate the answer:

$$5 \overline{\smash{)}3.{}^{3}0} = 0.6$$

How do we convert a decimal to a percentage?

Multiply the decimal by 100.

0.6 × 100 = 60

Converting Fractions to Percentages

To convert a fraction to a percentage, we must
first convert the fraction to a decimal:

Convert $\frac{2}{8}$ to a decimal **= 25%**

1. Divide the numerator by the denominator: **2 ÷ 8**

2. Use the bus stop method to calculate the answer:

$$8 \,|\, \overline{2 . {}^{2}0 {}^{4}0} = 0.25$$

3. Multiply the decimal by 100. **0.25 × 100 = 25**

Converting Fractions to Percentages

Convert each fraction to a percentage.

1. $\frac{2}{5}$ **40%**

2. $\frac{3}{12}$ **25%**

3. $\frac{3}{4}$ **75%**

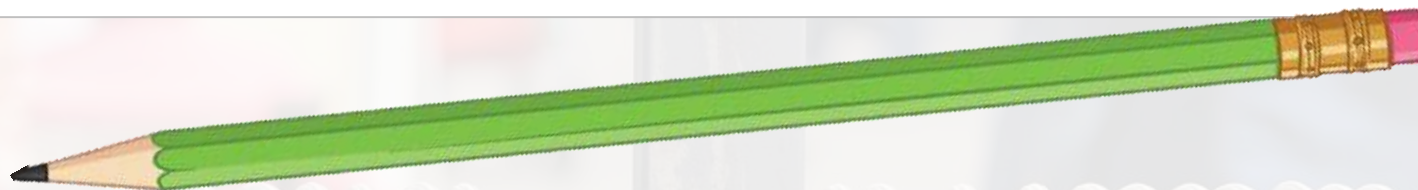4. $\frac{8}{20}$ **40%**

5. $\frac{5}{25}$ **20%**

F.D.P. Grid

F.D.P. Grid

		What we know		
What we want to find out		Fraction	Decimal	Percentage
	Fraction			
	Decimal	Divide numerator by denominator		Divide by 100
	Percentage	Divide numerator by denominator then multiply by 100	Multiply by 100	

Maths

visit twinkl.com

twinkl
Quality Standard
Approved

Your Turn

Instructions: Cut out each card and match up the equivalent fraction, decimal and percentages

0.75	10%	$\frac{1}{4}$
25%	$\frac{3}{5}$	0.25
$\frac{2}{8}$	0.10	75%
12.5%	0.30	$\frac{1}{10}$
$\frac{1}{8}$	40%	0.02
0.25	$\frac{2}{5}$	30%
$\frac{1}{50}$	0.60	25%
2%	0.125	$\frac{3}{4}$
$\frac{2}{20}$	10%	0.40
0.10	$\frac{3}{10}$	60%

Problem-Solving Maze

START

Instructions

Find a way through the maze. You are only allowed to move to something that is equivalent. You may move left, right, up or down but not diagonally.

$\frac{2}{5}$	25%	$\frac{16}{64}$	0.16	16%
0.28	$\frac{4}{16}$	$\frac{5}{20}$	0.04	$\frac{1}{25}$
0.4	$\frac{1}{4}$	$\frac{6}{24}$	$\frac{14}{100}$	$\frac{14}{56}$
$\frac{5}{7}$	$\frac{35}{140}$	$\frac{19}{76}$	0.25	25%

END

Secondary

What Order?

Order the following from smallest to largest:

$\frac{3}{12}$ 0.30   22% $\frac{2}{5}$ 28%

What Order?

Order the following from smallest to largest:

$\frac{3}{12}$ 0.30   22% $\frac{2}{5}$ 28%

First, you must convert them to the same unit, for example all percentages:

25%   30%   22%   40%   28%

Now, you are able to order them from smallest to largest:

22%   25%   28%   30%   40%

The last step is to use the original units in your final answer:

22% $\frac{3}{12}$ 28%   0.30 $\frac{2}{5}$

SALE
twinkl
%