



# St John Fisher RC Primary School

## Year 6 Maths Knowledge Organiser

### Spring 2 Block 4 – Percentages (1)

Objectives	Teacher
• I can use common factors and multiples to simplify fractions express fractions in the same denominations.	
• I can identify the percent symbol (%) and how it relates to parts per hundred, hundredths and decimals.	
• I can use equivalences between simple fractions, decimals and percentages to help me solve problems.	

#### Fractions, Decimals & Percentages

<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; width: 30%;"><math>\frac{50}{100} = \frac{1}{2} = 0.5 = 50\%</math></div> <div style="border: 1px solid black; padding: 2px; width: 30%;"><math>\frac{25}{100} = \frac{1}{4} = 0.25 = 25\%</math></div> <div style="border: 1px solid black; padding: 2px; width: 30%;"><math>\frac{10}{100} = \frac{1}{10} = 0.1 = 10\%</math></div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; width: 30%;"><math>\frac{75}{100} = \frac{3}{4} = 0.75 = 75\%</math></div> <div style="border: 1px solid black; padding: 2px; width: 30%;"><math>\frac{1}{100} = 0.01 = 1\%</math></div> <div style="border: 1px solid black; padding: 2px; width: 30%;"><math>\frac{20}{100} = \frac{2}{10} = 0.2 = 20\%</math></div> </div>	<h4>Fractions to Percentages</h4> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;"> <math>\begin{matrix} \times 2 \\ \uparrow \downarrow \\ \frac{15}{50} = \frac{30}{100} = 0.3 = 30\% \\ \downarrow \uparrow \\ \times 2 \end{matrix}</math> </div> <div style="text-align: center;"> <math>\begin{matrix} \div 2 \\ \uparrow \downarrow \\ \frac{60}{200} = \frac{30}{100} = 0.3 = 30\% \\ \downarrow \uparrow \\ \div 2 \end{matrix}</math> </div> </div>
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#### Key Vocabulary

<b>Factor</b>	An integer that divides exactly into a whole number without a remainder.
<b>Multiple</b>	A number that you get when multiplying a certain number by an integer.
<b>Per Cent (%)</b>	Latin for 'out of 100'. Percentage.
<b>Equivalent Fraction</b>	A fraction that has an equal amount to a decimal or a percentage. Part of a larger amount.
<b>Equivalent Decimal</b>	A decimal that has an equal amount to a fraction or a percentage. Part of a larger amount.
<b>Convert</b>	To change one thing to another. E.g. convert a fraction to a decimal.

#### Sentence Stems

To find an equivalent fraction, I need to _____ or _____ the _____ and the _____ by the same number	The fraction _____ can be expressed as _____ ÷ _____ _____ % is equivalent to _____
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#### Assessment



# St John Fisher RC Primary School

## Year 6 Maths Knowledge Organiser

### Spring 2 Block 4 – Percentages (2)

Objectives	Teacher
<ul style="list-style-type: none"> <li>I can solve problems including the calculation of percentages.</li> </ul>	
<ul style="list-style-type: none"> <li>I can solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> </ul>	

#### Fractions, Decimals & Percentages

##### Order & Compare

$\frac{3}{10}$

>

25%

>

0.2

$\frac{30}{100} = 30\%$

$\frac{25}{100} = 25\%$

$\frac{20}{100} = 20\%$

  

80%

=

0.8

=

$\frac{4}{5}$

$\frac{80}{100} = 80\%$

$\frac{80}{100} = 80\%$

$\frac{80}{100} = 80\%$

##### Percentages of Amounts

$50\% = \frac{1}{2}$  so we can divide by 2

$10\% = \frac{1}{10}$  so we can divide by 10

$25\% = \frac{1}{4}$  so we can divide by 4

$1\% = \frac{1}{100}$  so we can divide by 100

10% = 20

20% = 40

10% of 200  
 $200 \div 10 = 20$

20 × 3 = 60  
30% = 60

20 + 2 = 40  
5% = 10

35% of 200 = ?

35% = 30% + 5%  
60 + 10 = 70  
so 35% of 200 = 70

#### Key Vocabulary

<b>Per Cent (%)</b>	Latin for 'out of 100'. Percentage.
<b>Equivalent Fraction</b>	A fraction that has an equal amount to a decimal or a percentage. Part of a larger amount.
<b>Equivalent Decimal</b>	A decimal that has an equal amount to a fraction or a percentage. Part of a larger amount.
<b>Convert</b>	To change one thing to another. E.g. convert a fraction to a decimal.
<b>Compare</b>	To look at two or more things to find what is the same, different or equal (greater than or smaller than).
<b>Order</b>	To place amounts into a specific sequence. Smallest to largest or largest to smallest in size.

#### Sentence Stems

_____ is greater/smaller than one half, and _____ is smaller/greater than one half, so _____ is greater/smaller than _____	There are _____ lots of _____% in 100%
	To find _____% of a number, I need to divide by _____

#### Assessment