

Year 6

Tuesday 9th June 2020

Maths

LO: equivalent fractions, decimals and percentages.

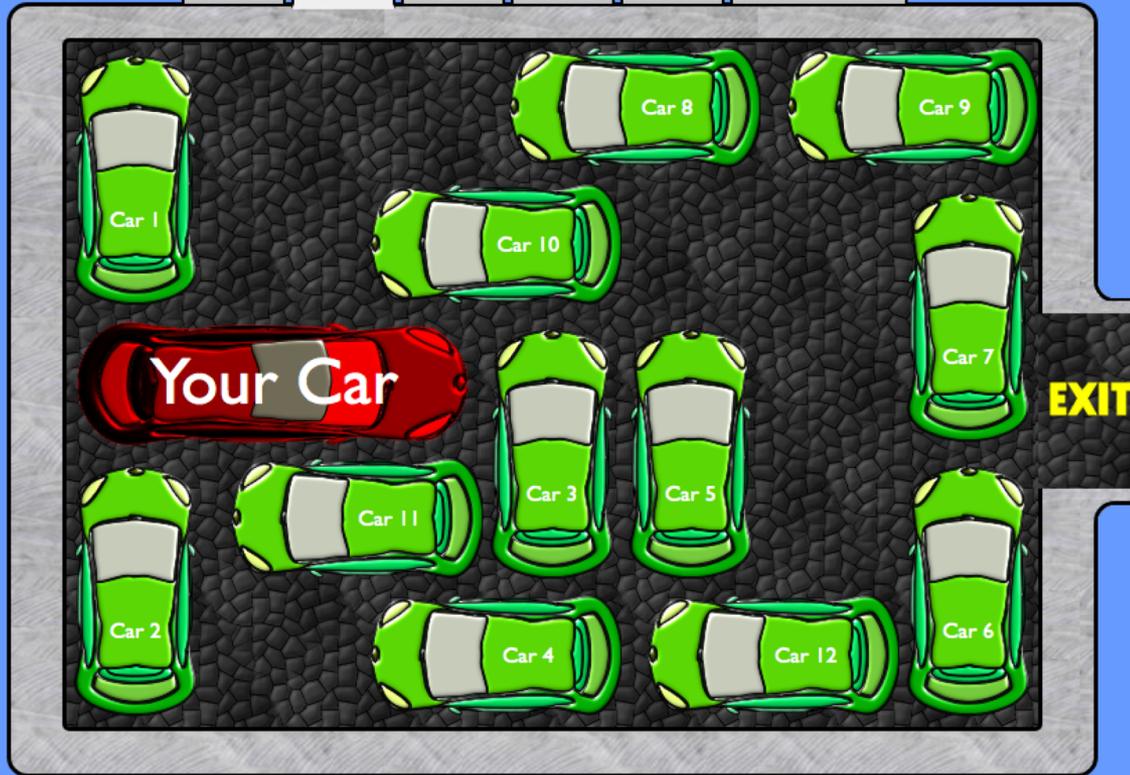
Please note: this link only works on either pdf or the link above this powerpoint.
The video lesson is available here – Summer Term - Week 6 - lesson 2



Brain Melter!

CAR PARK PUZZLE

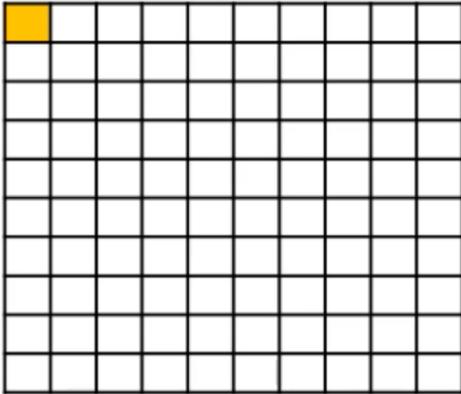
Level 1 **Level 2** Level 3 Level 4 Level 5 More Puzzles



Can you get your car out of the very crowded car park by moving other cars forwards or backwards?

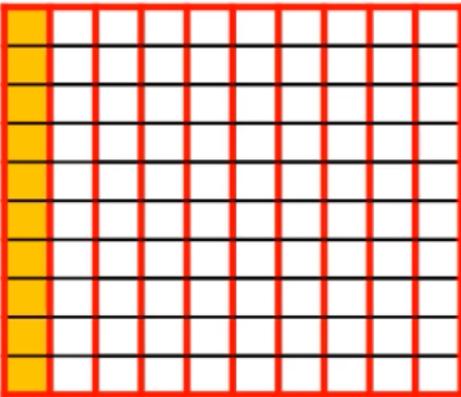
[Check if your solution work here.](#)

Re-cap



= one hundredth

$$= \frac{1}{100} = 0.01$$



$$= \frac{10}{100} = \text{ten hundredths}$$

$$= \frac{1}{10} = \text{one tenth} = 0.1$$

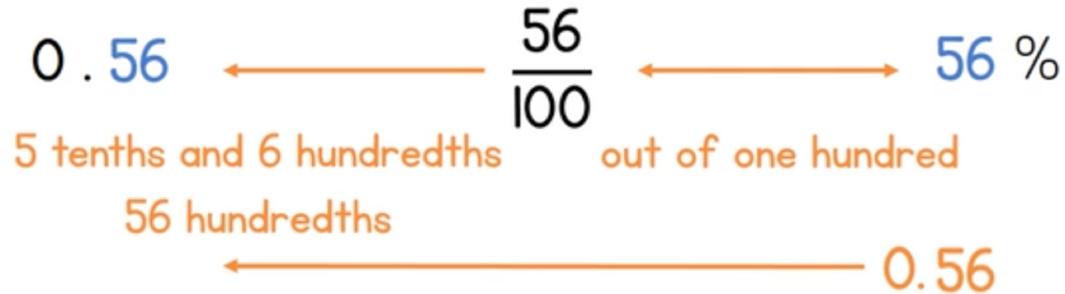
A blue curved arrow points from the fraction $\frac{10}{100}$ to $\frac{1}{10}$ with the label $\div 10$.

percentage
└───┬───┘
└───┬───┘
'out of' 'one hundred'

$$\frac{50}{100} = 50 \text{ out of one hundred}$$

If we can create a fraction out of 100 then the numerator is the **percentage (amount per hundred)** and to convert the to **a decimal** consider the place value of each digit in the numerator.

Example:



1:

0.

100

97 %

2:

0.33

100

%

Sometimes you may need to **convert** your fraction so that it **is out of 100**.

Example:

0.80

$$\frac{4}{5} = \frac{80}{100}$$

The diagram shows the fraction $\frac{4}{5}$ being converted to $\frac{80}{100}$. A blue arrow above the fraction points from 4 to 80 with the label $\times 20$. A blue arrow below the fraction points from 5 to 100 with the label $\times 20$.

80 %

1:

0.75

$$\frac{\square}{\square}$$

%

2:

0.

$$\frac{\square}{\square}$$

30 %

Can you simplify your fractions?

Task:

- 1: Convert 9 % and 0.3 into fractions, decimals and percentages.

9 % 0.3

- 2: Four children were completing some maths work.
Put the children in order of who got the most correct.



$\frac{17}{20}$ correct



84 % correct



0.8 correct



12 % incorrect

EXT:

I'm thinking of a fraction -
can you guess what it is?

Have a go

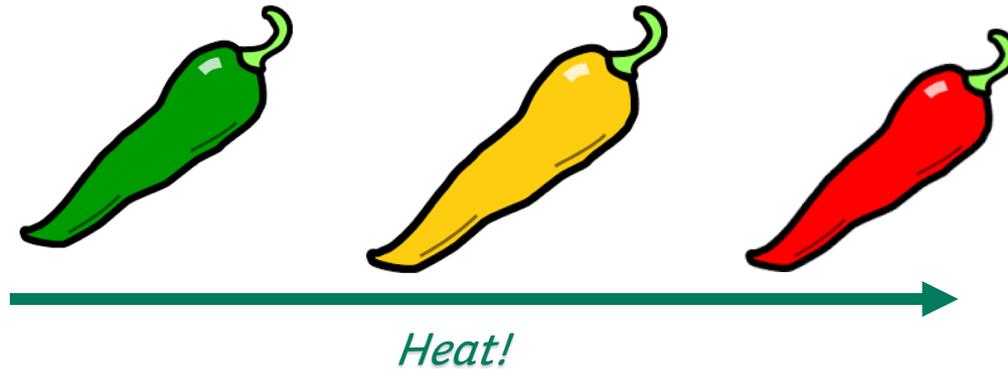


- It is less than 73 %
- It is greater than 0.4
- It has a denominator of 5



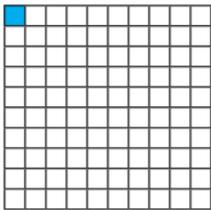
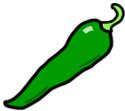
The independent work continues on the next two slides. There are 6 questions and 1 extension.

(Español - seis preguntas y una extensión)



Equivalent FDP

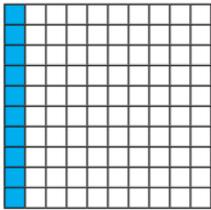
1 What fraction, decimal and percentage of each grid is shaded blue?



fraction =

decimal =

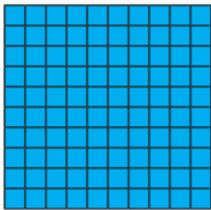
percentage =



fraction =

decimal =

percentage =

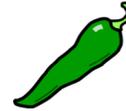


fraction =

decimal =

percentage =

2 Match the equivalent fractions, decimals and percentages.



$\frac{15}{100}$

0.05

5%

$\frac{1}{20}$

0.5

15%

$\frac{1}{5}$

0.2

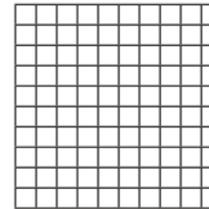
50%

$\frac{1}{2}$

0.15

20%

3 a) Shade the grid in the given proportions.



- $\frac{3}{10}$ green
- 0.03 red
- 13% blue
- 0.3 yellow

b) What proportion of the grid is unshaded?
Write your answer as a fraction, decimal and percentage.

fraction = decimal = percentage =

4 Complete the table.



Fraction	Decimal	Percentage
	0.21	
		12%
$\frac{2}{10}$		
	0.4	
	0.44	
		4%
$\frac{3}{4}$		
	0.99	

5 Amir was asked to complete the statement using $<$, $>$ or $=$.



14% $>$ 0.4



14 is greater than 4

What mistake has Amir made?

6 Match the decimal cards to the people.



My decimal is $\frac{4}{10}$ less than 100%.

0.65



My decimal cannot be simplified when it is written as a fraction.

0.57



My decimal is 10% less than $\frac{3}{4}$

0.61



My decimal is greater than 60%.

0.6

Ext:

Use the digit cards to write a decimal greater than $\frac{1}{5}$ but less than 40%.

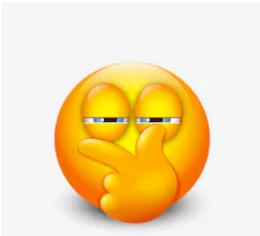
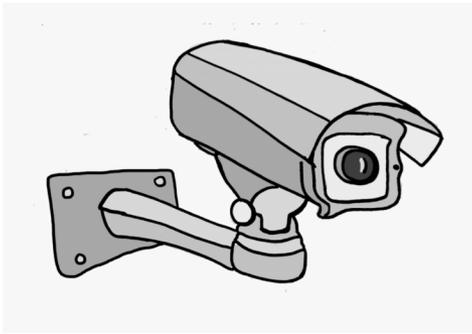
You may not use a card more than once in each number.



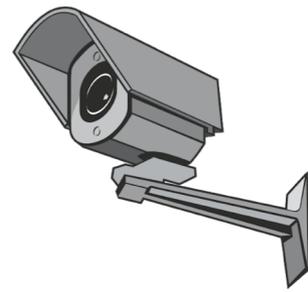
.

How many other answers can you find?



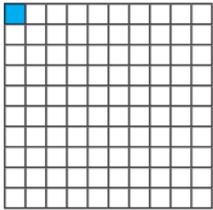


The next four slides contain the answers should you wish to check you work and reflect on what you understand.



Equivalent FDP

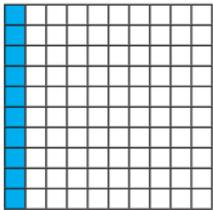
1 What fraction, decimal and percentage of each grid is shaded blue?



fraction = $\frac{1}{100}$

decimal = 0.01

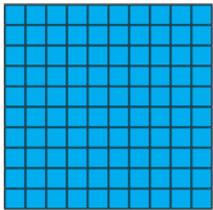
percentage = 1%



fraction = $\frac{1}{10}$

decimal = 0.1

percentage = 10%

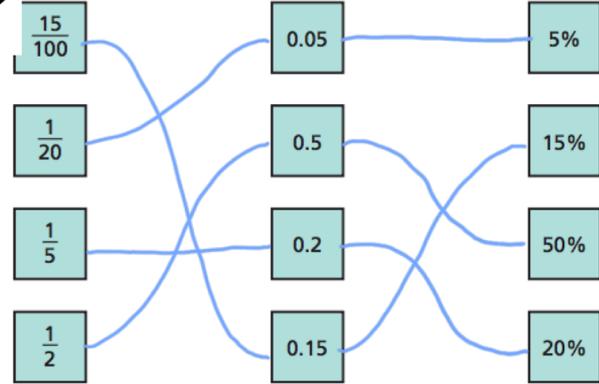


fraction = $\frac{100}{100}$

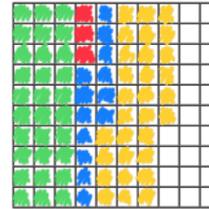
decimal = 1

percentage = 100%

2 Match the equivalent fractions, decimals and percentages.



3 a) Shade the grid in the given proportions.

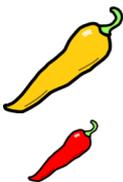


- $\frac{3}{10}$ green
- 0.03 red
- 13% blue
- 0.3 yellow

b) What proportion of the grid is unshaded?
Write your answer as a fraction, decimal and percentage.

fraction = $\frac{6}{25}$ decimal = 0.24 percentage = 24%

4 Complete the table.



Fraction	Decimal	Percentage
$\frac{21}{100}$	0.21	21%
$\frac{3}{25}$	0.12	12%
$\frac{2}{10}$	0.2	20%
$\frac{2}{5}$	0.4	40%
$\frac{11}{25}$	0.44	44%
$\frac{1}{25}$	0.04	4%
$\frac{3}{4}$	0.75	75%
$\frac{99}{100}$	0.99	99%

5 Amir was asked to complete the statement using $<$, $>$ or $=$.

14% $>$ 0.4



14 is greater than 4

What mistake has Amir made?

He hasn't compared them in the same form. $0.4 = 40\%$ and $40\% > 14\%$ so $14\% < 0.4$

6 Match the decimal cards to the people.



My decimal is $\frac{4}{10}$ less than 100%.



My decimal cannot be simplified when it is written as a fraction.



My decimal is 10% less than $\frac{3}{4}$



My decimal is greater than 60%.

0.65

0.57

0.61

0.6

Ext:

Use the digit cards to write a decimal greater than $\frac{1}{5}$ but less than 40%.

You may not use a card more than once in each number.



Eg. 0.24

How many other answers can you find?