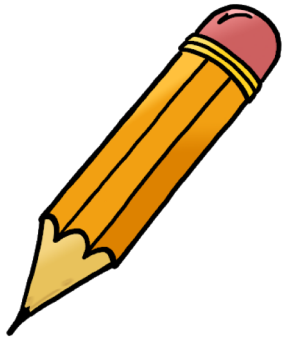
Year 6

Monday 8th June 2020

Maths

LO: converting fractions to 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 1

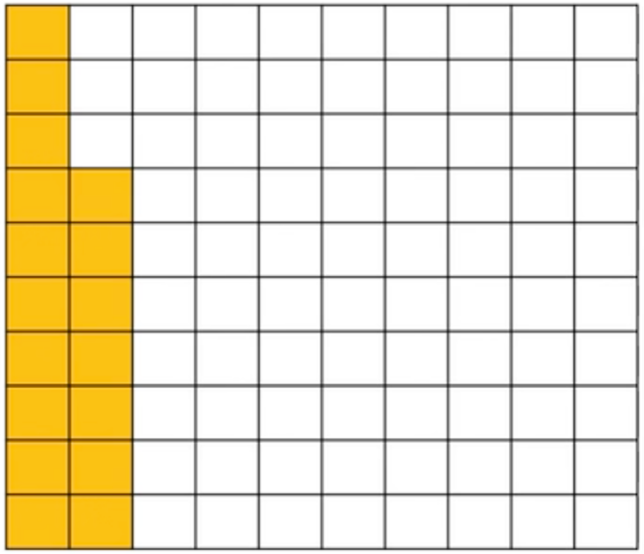


Brain Melter!

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.

Today we are revising converting fractions into percentages. Let's start off with this example of a hundred square. Here we have 17 squares out of 100 shaded in yellow.



= seventeen hundredths

$= \frac{17}{100}$

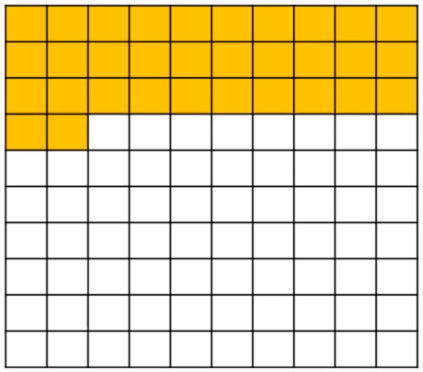
What percentage of the grid is shaded?

'out of' 'one hundred'

17%

Let's use this method.
If we can create a fraction out of 100 then the numerator is the percentage (amount per hundred).

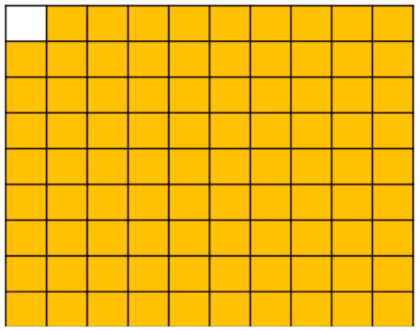
1:



$\frac{\square}{100} = \square$ out of one hundred

$= \square\%$

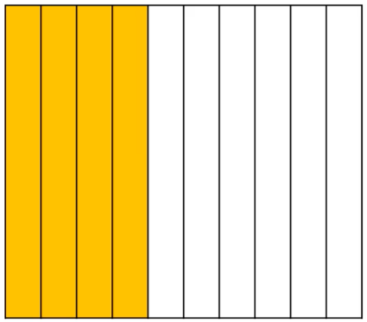
2:



$\frac{\square}{100} = \square$ out of one hundred

$= \square\%$

3:

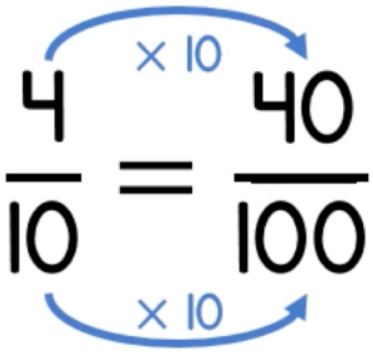


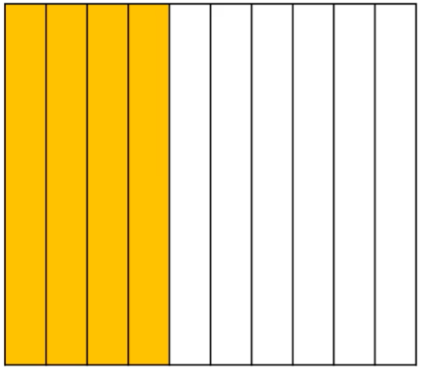
$\frac{\square}{100} = \square$ out of one hundred

$= \square\%$

For question number 3 did you notice the shaded fraction was four out of ten?

You can then convert the fraction so that it is out of 100.

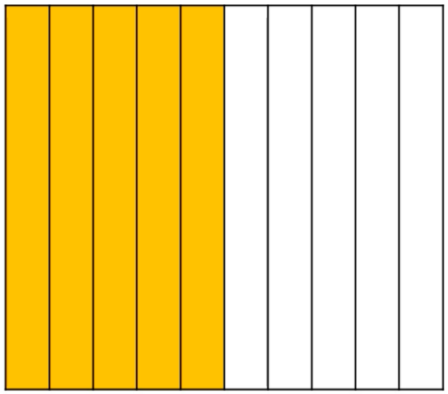




$\frac{40}{100}$ = 40 out of one hundred

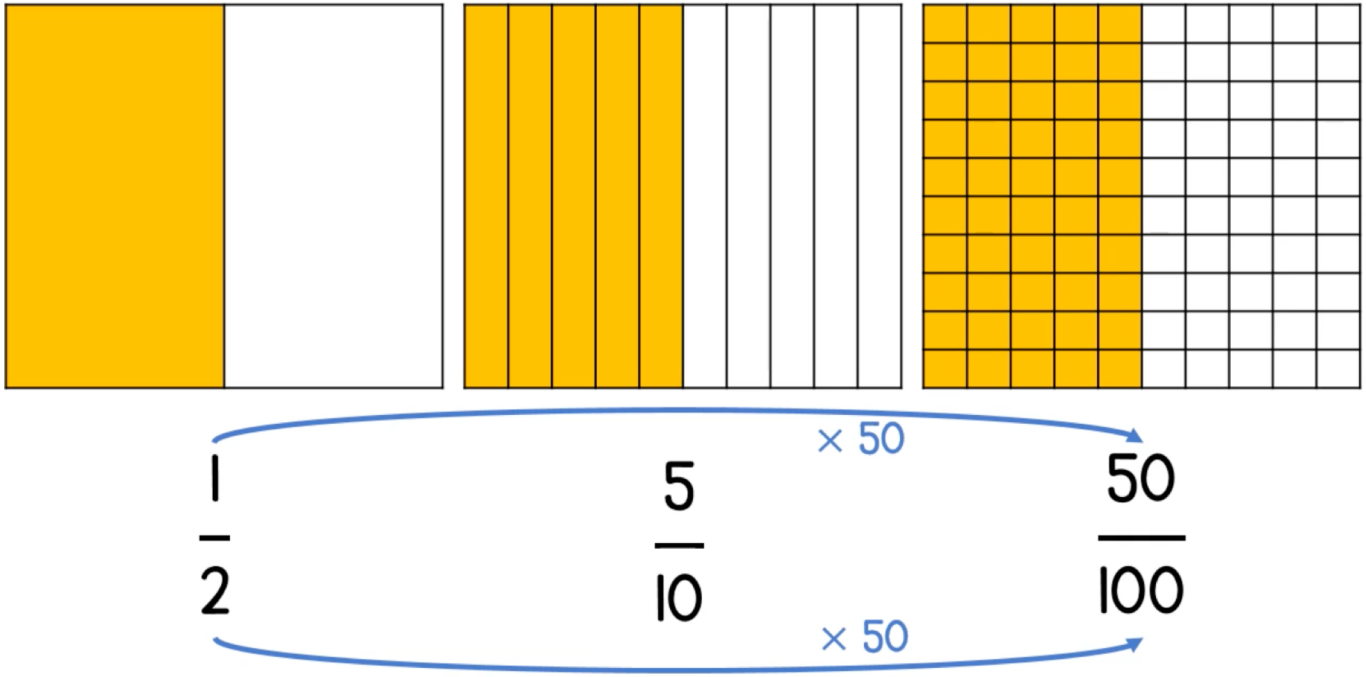
= 40%

4: What would the shaded area of this shape be as a fraction and percentage?

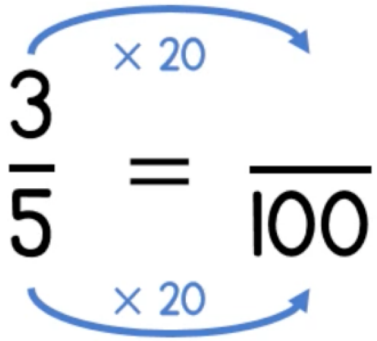


Did you notice...

50%



Example conversion...



Have a go...

a) $\frac{\square}{100} = 77\ \%$

b) $\frac{\square}{10} = \frac{80}{\square} = \square\ \%$

c) $\frac{1}{\square} = \frac{\square}{100} = 20\ \%$

d) $\frac{\square}{4} = \frac{75}{100} = \square\ \%$

e) $\frac{1}{\square} = \frac{\square}{\square} = 5\ \%$

f) $\frac{\square}{20} = \frac{15}{100} = \square\ \%$

g) $\frac{6}{20} = \frac{\square}{100} = \square\ \%$

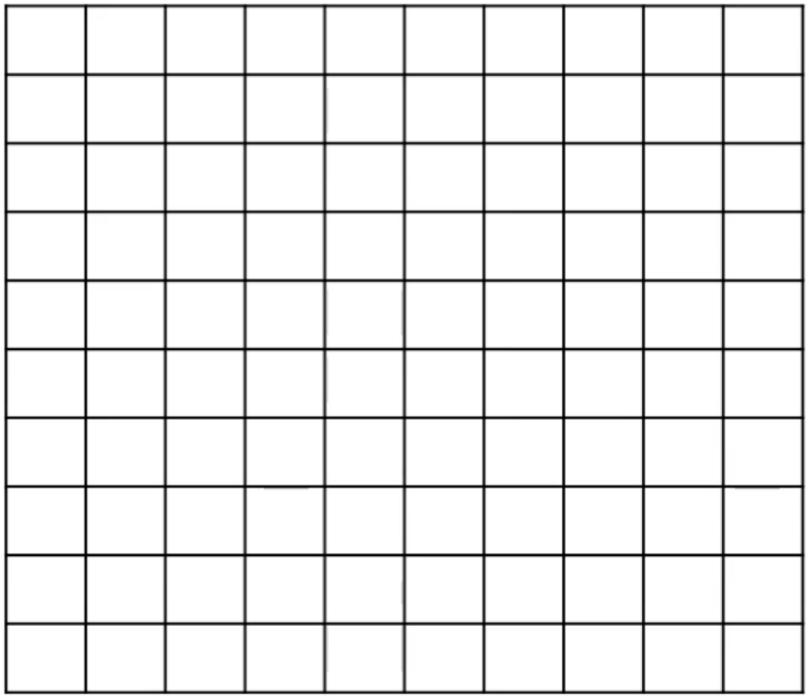
$\frac{2}{5}$ of the children at a school go in a car.

$\frac{1}{20}$ of the children cycle.

32 % of the children get the bus.

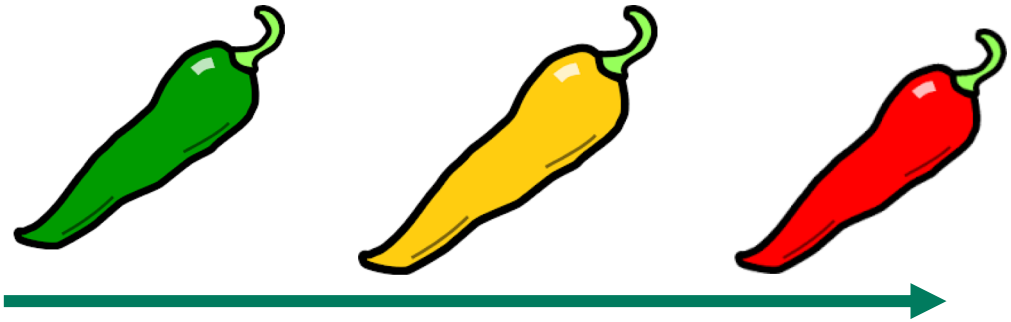
The rest of the children walk.

What percentage of children walk to school?



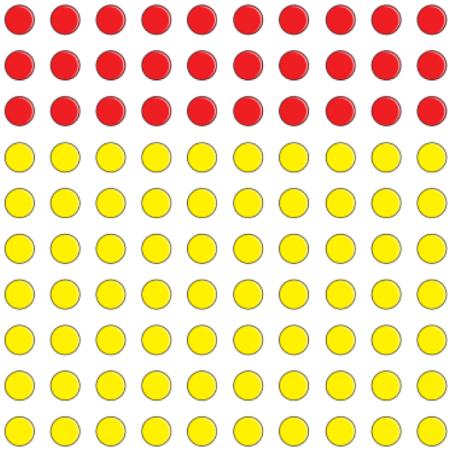
The independent work continues on the next two slides. There are 6 questions and 1 extension.

(Espanol - seis preguntas y una extensión)



Fractions to percentages

1



a) What fraction of the array of counters is red?

b) What fraction of the array of counters is yellow?

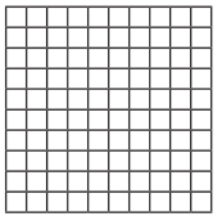
c) What percentage of the array of counters is red? ____ %

d) What percentage of the array of counters is yellow? ____ %

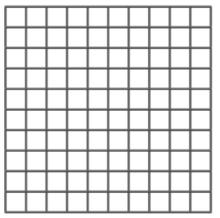
e) What do you notice about the two percentages?

2 **a)** Shade the hundred squares to represent the fractions.

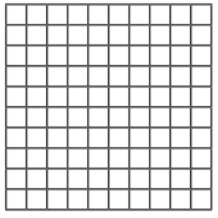
$\frac{40}{100}$



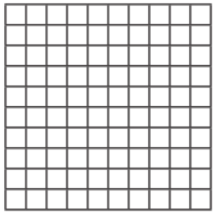
$\frac{65}{100}$



$\frac{1}{2}$



$\frac{7}{10}$



b) Write the fractions as percentages.

$\frac{40}{100}$ = ____ % $\frac{65}{100}$ = ____ %

$\frac{1}{2}$ = ____ % $\frac{7}{10}$ = ____ %

c) Compare your shaded grids with a partner's.

What is the same and what is different?

3 Fill in the missing numbers.

a) $\frac{9}{10} = \frac{\square}{100} = \square\%$

b) $\frac{9}{20} = \frac{\square}{100} = \square\%$

c) $\frac{9}{50} = \frac{\square}{100} = \square\%$

d) $\frac{9}{25} = \frac{\square}{100} = \square\%$

4

$\frac{1}{10}$ is 10%, so $\frac{1}{20}$ must be 20%.

Explain the mistake that Ron has made.

What is the correct answer?

$\frac{1}{20} = \square\%$

5 Convert the fractions to percentages.

a) $\frac{1}{4} = \square$

$\frac{1}{2} = \square$

$\frac{3}{4} = \square$

b) $\frac{1}{5} = \square$

$\frac{2}{5} = \square$

$\frac{4}{5} = \square$

c) $\frac{16}{20} = \square$

d) $\frac{45}{50} = \square$

$\frac{8}{20} = \square$

$\frac{4}{20} = \square$

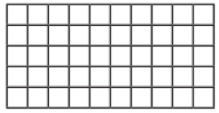
$\frac{9}{10} = \square$

$\frac{18}{20} = \square$

e) What do you notice?

6 a) Shade the grid in the given proportions.

- $\frac{3}{5}$ green
- 14% red
- $\frac{4}{20}$ blue
- the rest yellow



b) What percentage of the grid is yellow?

$\square\%$

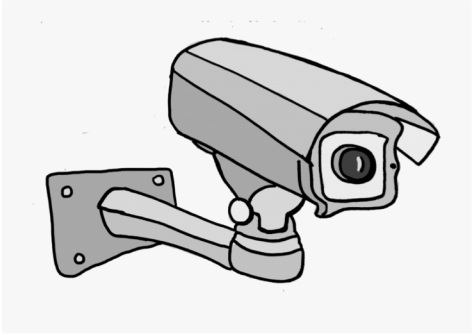
Ext:

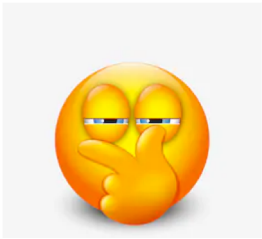
a) Use each digit card once to make the statements correct.

1	2	3	4	5

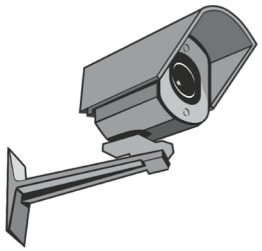
$\frac{\square}{\square} > \frac{\square}{0\%}$ $\quad 75\% = \frac{\square}{4}$ $\quad \frac{3}{\square} < 65\%$

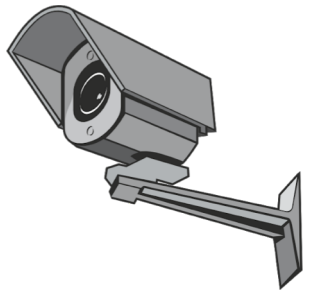
b) Are there any other solutions?





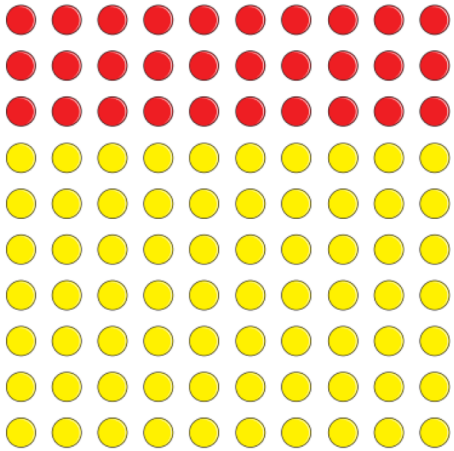
The next four slides contain the answers should you wish to check you work and reflect on what you understand.





Fractions to percentages

1



a) What fraction of the array of counters is red? $\frac{3}{10}$

b) What fraction of the array of counters is yellow? $\frac{7}{10}$

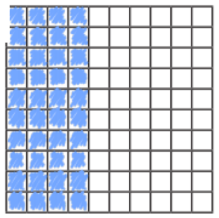
c) What percentage of the array of counters is red? 30 %

d) What percentage of the array of counters is yellow? 70 %

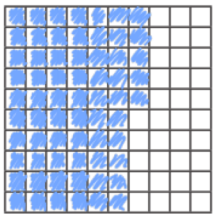
e) What do you notice about the two percentages?

2 **a)** Shade the hundred squares to represent the fractions.

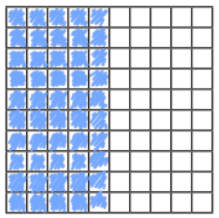
$\frac{40}{100}$



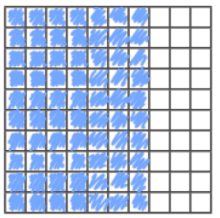
$\frac{65}{100}$



$\frac{1}{2}$



$\frac{7}{10}$



b) Write the fractions as percentages.

$\frac{40}{100}$ = 40 % $\frac{65}{100}$ = 65 %

$\frac{1}{2}$ = 50 % $\frac{7}{10}$ = 70 %

c) Compare your shaded grids with a partner's.
What is the same and what is different?

3 Fill in the missing numbers.

a) $\frac{9}{10} = \frac{90}{100} = 90\%$

b) $\frac{9}{20} = \frac{45}{100} = 45\%$

c) $\frac{9}{50} = \frac{18}{100} = 18\%$

d) $\frac{9}{25} = \frac{36}{100} = 36\%$

4

$\frac{1}{10}$ is 10%, so $\frac{1}{20}$ must be 20%.

Explain the mistake that Ron has made.

What is the correct answer?

$\frac{1}{20} = 5\%$

5 Convert the fractions to percentages.

a) $\frac{1}{4} = 25\%$

$\frac{1}{2} = 50\%$

$\frac{3}{4} = 75\%$

b) $\frac{1}{5} = 20\%$

$\frac{2}{5} = 40\%$

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

c) $\frac{16}{20} = 80\%$

$\frac{8}{20} = 40\%$

$\frac{4}{20} = 20\%$

d) $\frac{45}{50} = 90\%$

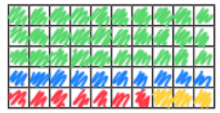
$\frac{9}{10} = 90\%$

$\frac{18}{20} = 90\%$

e) What do you notice?

6 a) Shade the grid in the given proportions.

- $\frac{3}{5}$ green
- $\frac{4}{20}$ blue
- 14% red
- the rest yellow



b) What percentage of the grid is yellow?

6 %

Ext: a) Use each digit card once to make the statements correct.

1	2	3	4	5

$\frac{1}{2} > \frac{4}{10}$

$75\% = \frac{3}{4}$

$\frac{3}{5} < 65\%$

b) Are there any other solutions?