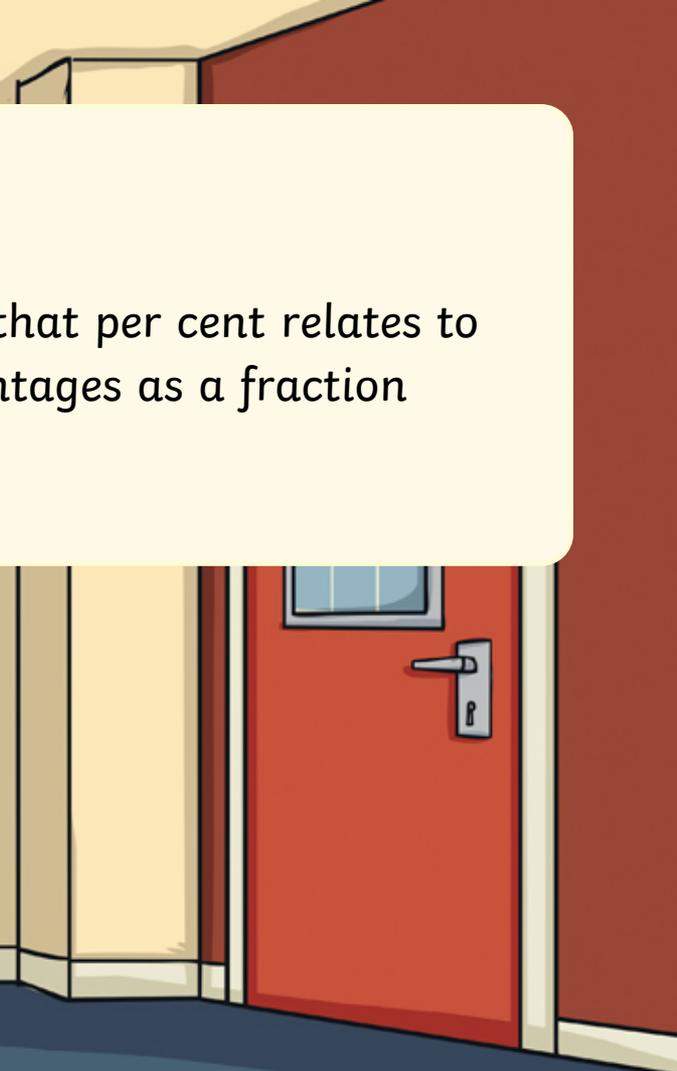


# Percentages as Fractions and Decimals

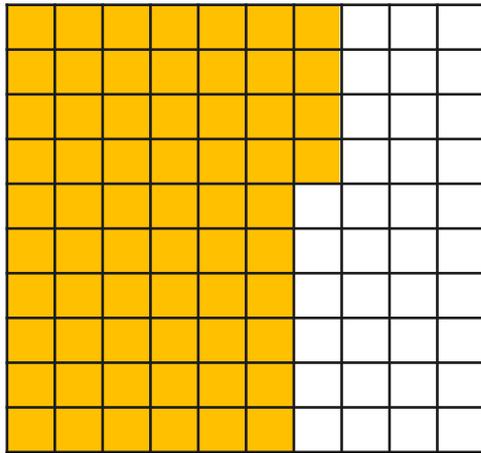
# Aim

- Recognise the per cent symbol and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.

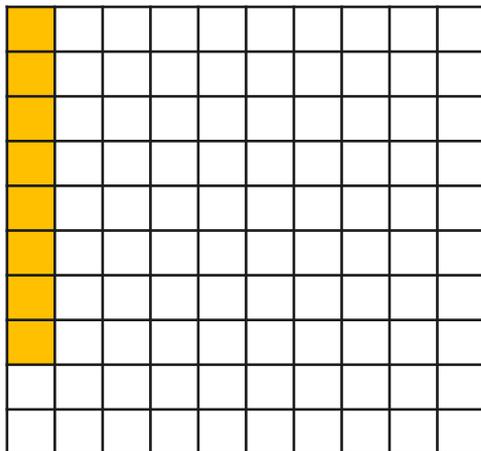




Complete the statements.



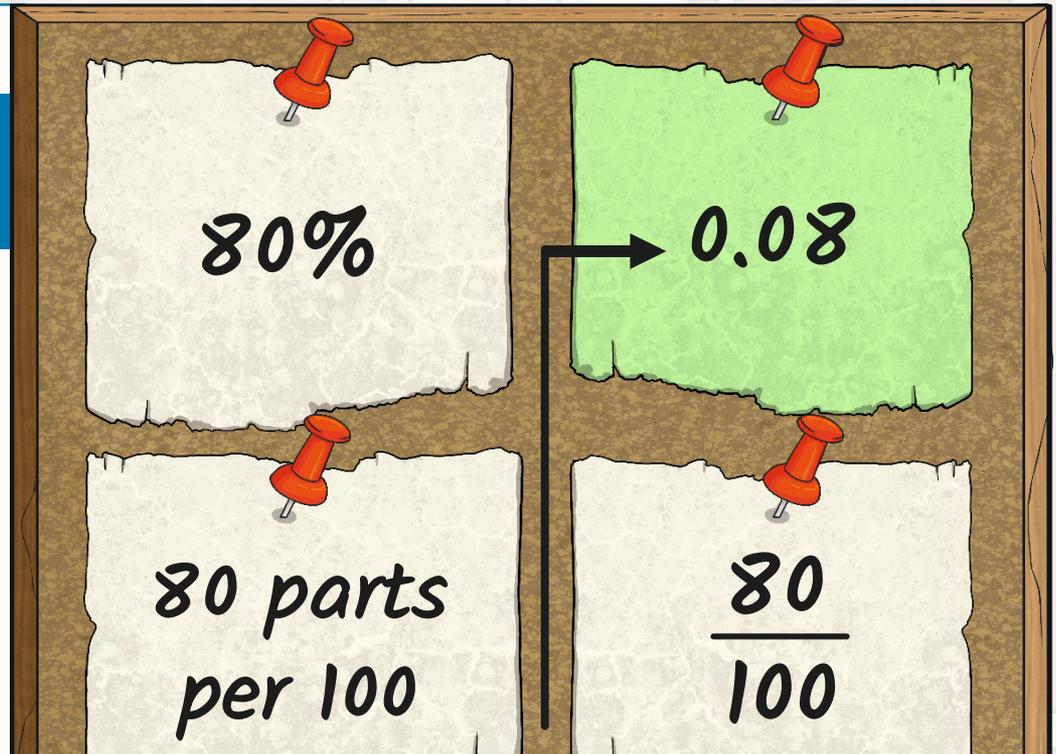
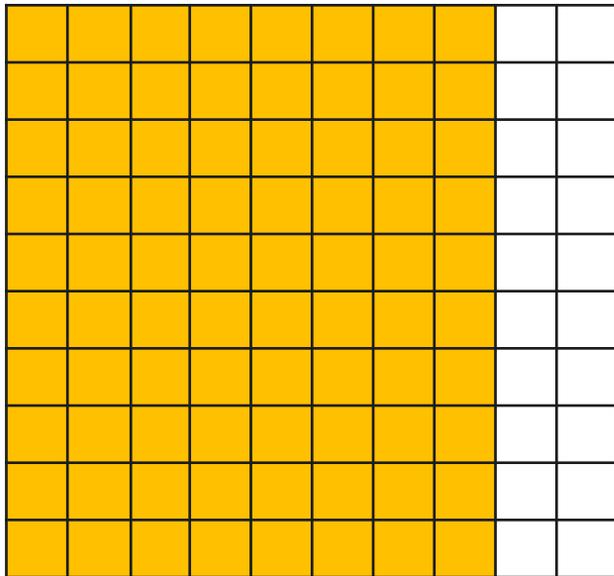
$$= \boxed{64} \text{ parts per 100} = \boxed{64\%} = \frac{\boxed{64}}{\boxed{100}} = 0.64$$



$$= \boxed{8} \text{ parts per 100} = \boxed{8\%} = \frac{\boxed{8}}{\boxed{100}} = \boxed{0.08}$$



Which is the odd one out? Why?



The decimal 0.08 is the odd one out as it is equivalent to 8%. The other amounts are all 80% or equivalent.



True or false?

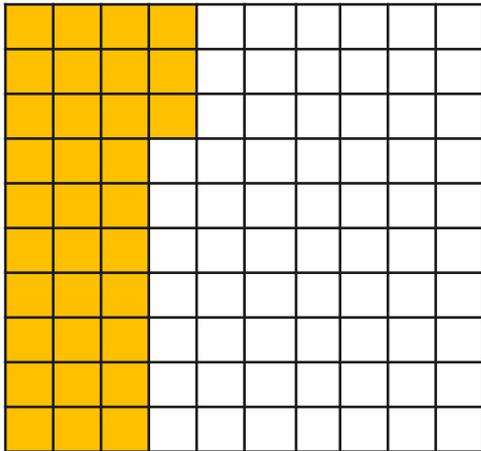
$$\frac{42}{100} < 0.8 > 14\%$$

True.

$$30 \text{ parts per hundred} > 4\% > 0.3$$

False.  
4% = 0.04 which is not greater than 0.3 so this is false.

$$18\% <$$



$$< 0.5$$

True.



Which numbers fill the table to make it correct?

Fraction	Fraction with a Denominator of 100	Percentage	Decimal
$\frac{40}{50}$	$\frac{80}{100}$ 	<b>80 %</b>	<b>0.8 or 0.80</b>
$\frac{30}{50}$	$\frac{60}{100}$ 	<b>60 %</b>	<b>0.6 or 0.60</b>
$\frac{80}{200}$	$\frac{40}{100}$ 	<b>40 %</b>	<b>0.4 or 0.40</b>
$\frac{130}{200}$	$\frac{65}{100}$ 	<b>65 %</b>	<b>0.65</b>



Three children are describing a different percentage.

Give two possible percentages that each child could be describing.



The fraction equivalent to my percentage is between  $\frac{20}{100}$  and  $\frac{20}{50}$ .

Sammy

**Sammy's percentage is any between 20% and 40%.**



As a decimal, my percentage is between 0.15 and 0.2.

Ethan

**Ethan's percentage is any between 15% and 20%.**



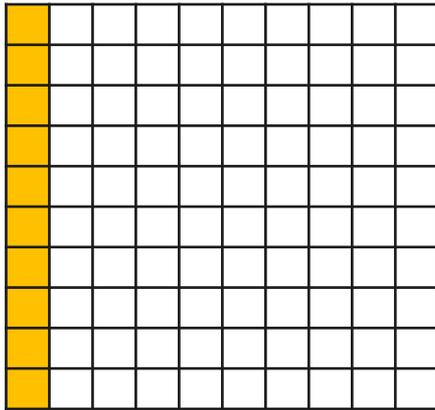
My percentage is between 0.13 and  $\frac{70}{100}$ .

Nadia

**Nadia's percentage is any between 13% and 35%.**



Read each child's statement.  
Explain and correct any mistakes they have made.



There is between 0.2 and 30% of the 100 square coloured in.

Ada



If I coloured in another 0.9 of this 100 square it would be 100% coloured in.

Leo



The fraction of the 100 square coloured in is  $\frac{10}{50}$ .

Oscar



Oscar is incorrect.

The fraction of the square coloured in is  $\frac{10}{100}$ . This is equivalent to  $\frac{5}{50}$  not  $\frac{10}{50}$ .  
coloured in for Ada's statement to be accurate, there is actually only 10% of the squares coloured in.



Tao has driven 178 miles of a 200 mile journey.

Eva has driven 320 miles of a 400 mile journey.

James has driven 210 miles of a 300 mile journey.

Give each person's journey as a fraction, percentage and decimal.

Which person has completed the greatest proportion of their journey? Give the remainder of their journey as a decimal.

**Tao:**  $\frac{178}{200} = \frac{89}{100} = 89\% = 0.89$

**Eva:**  $\frac{320}{400} = \frac{80}{100} = 80\% = 0.8$

**James:**  $\frac{210}{300} = \frac{70}{100} = 70\% = 0.7$

**Tao has completed the greatest proportion of the journey. He has 0.11 of his journey remaining.**

