

09.05.2025

IX.V.MMXXV

Equivalent fractions, decimals and percentages

What is 0.2 as a percentage?

What is 0.02 as a percentage?

What is 66% as a fraction?



Starter

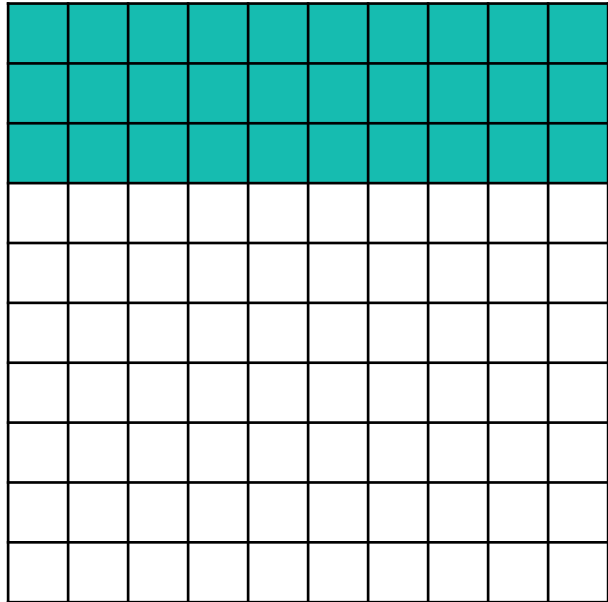
What is 0.2 as a percentage?

What is 0.02 as a percentage?

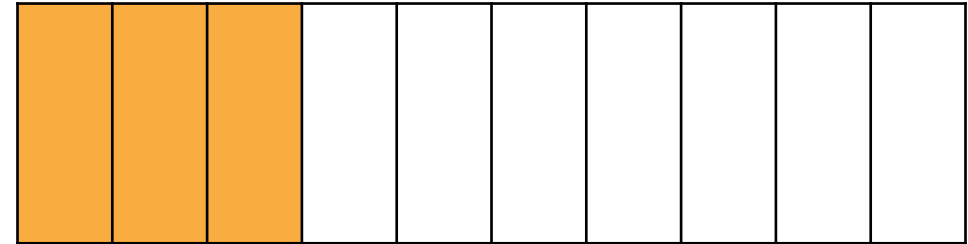
What is 66% as a fraction?



Percentages as fractions and decimals



$\frac{30}{100}$ of this diagram is shaded.
This makes it easy to work out the percentage. (30%)



$\frac{3}{10}$ or 0.3 of this diagram is shaded.
We can convert this into hundredths by multiplying the numerator and the denominator by 10.

$$\frac{3}{10} = \frac{30}{100}$$



Fractions as percentages and decimals



$$\frac{1}{5}$$

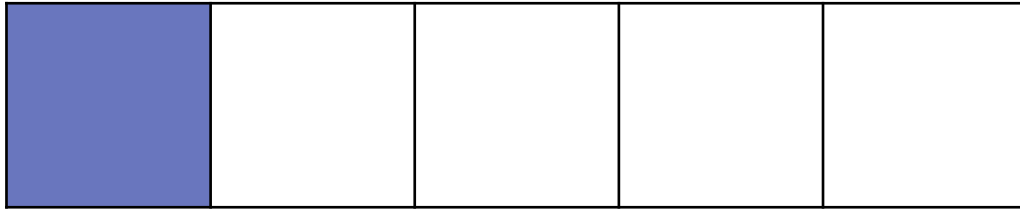
of this diagram is shaded.

How would we work this out as a percentage?

What is $\frac{1}{5}$ as a decimal?



Fractions as percentages and decimals



$$\frac{1}{5} = 20\% = 0.2$$

Converting the fraction into hundredths makes it much easier to work out the percentage.

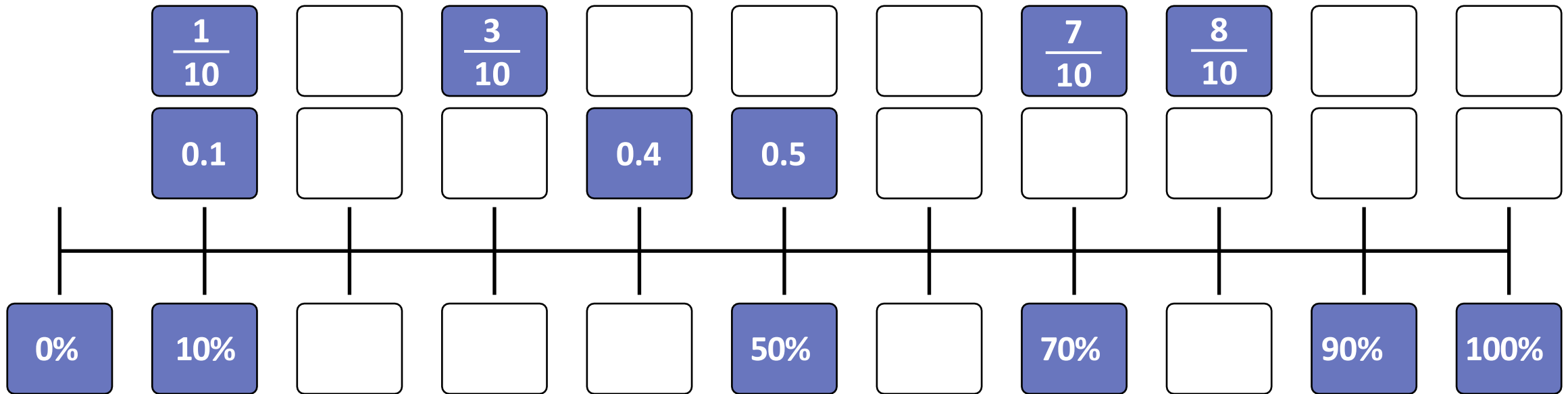
How would we write the following as percentages and decimals?

$\frac{2}{5}$	=	%	=	
$\frac{3}{5}$	=	%	=	
$\frac{4}{5}$	=	%	=	
$\frac{5}{5}$	=	%	=	



Percentages as fractions and decimals

We can use a number line to show equivalent fractions, percentages and decimals.



Complete the number line to show all equivalent fractions, percentages and decimals.

Comparing numbers

Use the correct symbol to complete the comparisons below.



a)

45%

$\frac{2}{5}$

b)

0.75

75%

c)

$\frac{4}{5}$

82%

d)

$\frac{250}{500}$

0.5



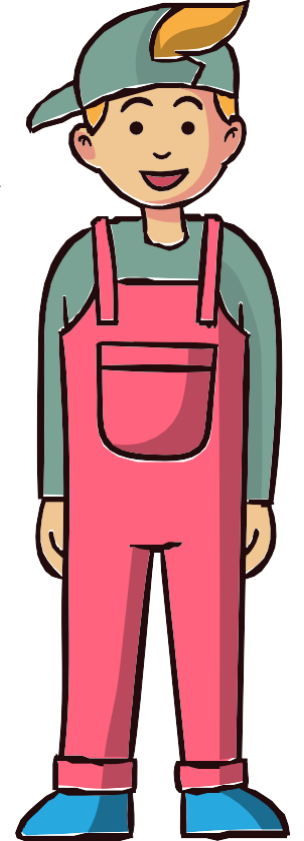
True or false?



Samira

To find 25% of 120,
I can halve 120 and
then halve it again.

To find 25% of 120,
I can find $\frac{1}{4}$ of it
using a bar model.



Oliver

Who is correct?



3) Fill in the missing symbol to complete these calculations.



$$\frac{1}{3}$$

$$13\%$$

$$0.6$$

$$\frac{3}{5}$$

$$4\%$$

$$\frac{1}{20}$$

$$0.25$$

$$\frac{52}{100}$$

4)



Rose

To work out what $\frac{9}{25}$ is as a percentage, I need to multiply the numerator and the denominator by 4.



Naomi

To work out what $\frac{168}{400}$ is as a percentage, I need to divide the numerator and the denominator by 4.

Who is correct? _____

Explain your answer.

5) Two children are raising money for a school disco.

They both want to raise £200.

Frankie has raised $\frac{3}{5}$ of his total amount.

Joshua has raised 75% of his total amount.

How much money do they have left to raise altogether?



6) There are 90 children in year 5 at a local primary school.

$\frac{2}{9}$ of the children have 3-4 pets.

50% of the children have 1-2 pets.

$\frac{1}{5}$ of the children have no pets.

The rest of the class have 5 or more pets.

How many children have 5 or more pets?

