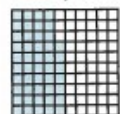


Per cent means out of 100.

Percentages are fractions with a denominator of 100.

The symbol for per cent is %.

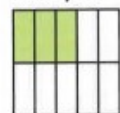
Example



$$\frac{47}{100} = 47\% = 0.47$$

To express fractions as percentages, change them to equivalent fractions with denominators of 100.

Examples



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



$$\frac{3}{4} = \frac{75}{100} = 75\%$$

To express decimals as percentages, multiply by 100.

Examples

$$0.2 = 20\% \quad (0.2 \times 100 = 20)$$

$$0.85 = 85\% \quad (0.85 \times 100 = 85)$$

It is useful to know that:

$$\frac{1}{100} = 0.01 = 1\%, \quad \frac{2}{100} = 0.02 = 2\%, \text{ etc.}$$

$$\frac{1}{10} = 0.1 = 10\%, \quad \frac{2}{10} = 0.2 = 20\%, \text{ etc.}$$

$$\frac{1}{4} = 25\%, \quad \frac{1}{2} = 50\%, \quad \frac{3}{4} = 75\%$$

A

Express each shaded area as:

- a fraction
- a decimal
- a percentage.

1



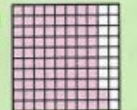
6



2



7



3



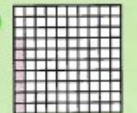
8



4



9



5



10



11 What percentage of the boxes contain:

- ticks
- crosses
- dots
- triangles?

x		✓	•	
✓	•			✓
		△	✓	•
•	✓		x	

12 What percentage of the boxes are blank?

B

1 Copy and complete the table.

Fractions	Decimals	%ages
$\frac{1}{10}$	0.1	10%
		50%
		32%
		90%
	0.18	
	0.25	
	0.02	
	0.4	
$\frac{7}{50}$		
$\frac{3}{4}$		
$\frac{6}{100}$		
$\frac{11}{25}$		
		1%
	0.95	

What percentage could be used in each sentence.

- Half the tissues in the box had been used.
- Nineteen of the twenty horses in the race were brown.
- The basketball team won four in every five matches played.
- Twenty-nine hundredths of the Earth's surface is water.
- Ella and Elysia achieved full marks in the Maths Test.
- Darren has read three quarters of his book.
- Twenty-seven in every fifty visitors to the Museum stayed for more than two hours.
- Nine out of the twenty-five balloons in the packet were yellow.
- Three in every five chocolates had a soft centre.