

Lesson 3: Percentages, Fractions and Decimals

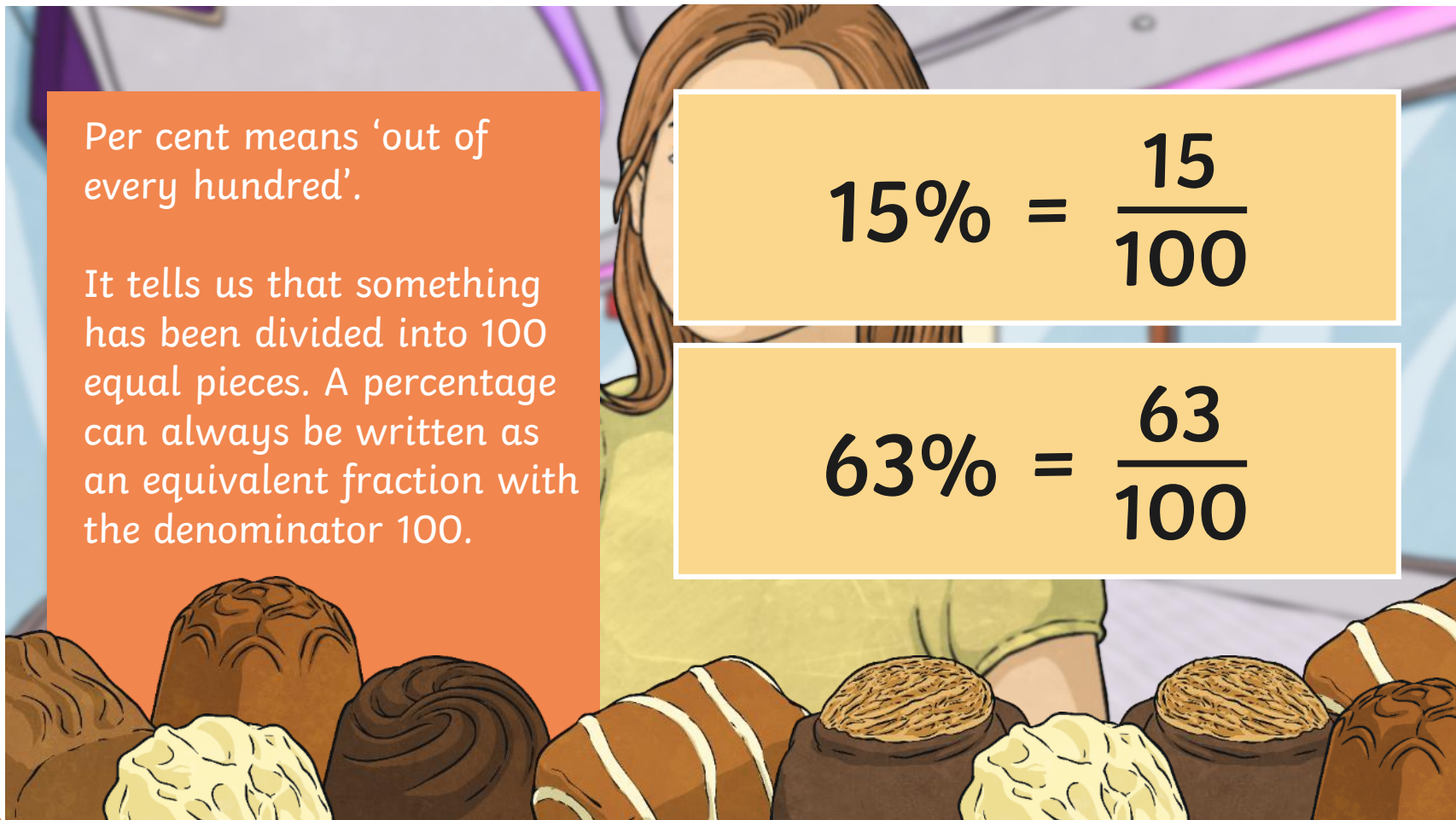
Percentages, Fractions and Decimals

Per cent means 'out of every hundred'.

It tells us that something has been divided into 100 equal pieces. A percentage can always be written as an equivalent fraction with the denominator 100.

$$15\% = \frac{15}{100}$$

$$63\% = \frac{63}{100}$$



Percentages, Fractions and Decimals

Per cent means 'out of every hundred'.

It tells us that something has been divided into 100 equal pieces. When a percentage is written as an equivalent decimal, we use tenths and hundredths.

$$63\% = \frac{63}{100} = 0.63$$

Would You Rather?



What proportion of this jar of sweets will give you the most sweets?

53%

0.49

$$\frac{64}{100}$$



Would You Rather?



What proportion of this jar of sweets will give you the most sweets?

53%

0.49

$\frac{64}{100}$

The easiest way to work this out is to make them all the same.
Let's start by making them all a fraction.

We know percent is out of a 100 so $53\% = \frac{53}{100}$

We know that $0.49 = \frac{49}{100}$

We already have $\frac{64}{100}$

Can you choose now?

Try the same method on the next few slides.

Would You Rather?



What proportion of this jar of sweets will give you the most sweets?

40%

0.5

$$\frac{30}{100}$$



Would You Rather?



What proportion of this jar of sweets will give you the most sweets?

26%

0.09

$$\frac{90}{100}$$



Would You Rather?



What proportion of this jar of sweets will give you the most sweets?

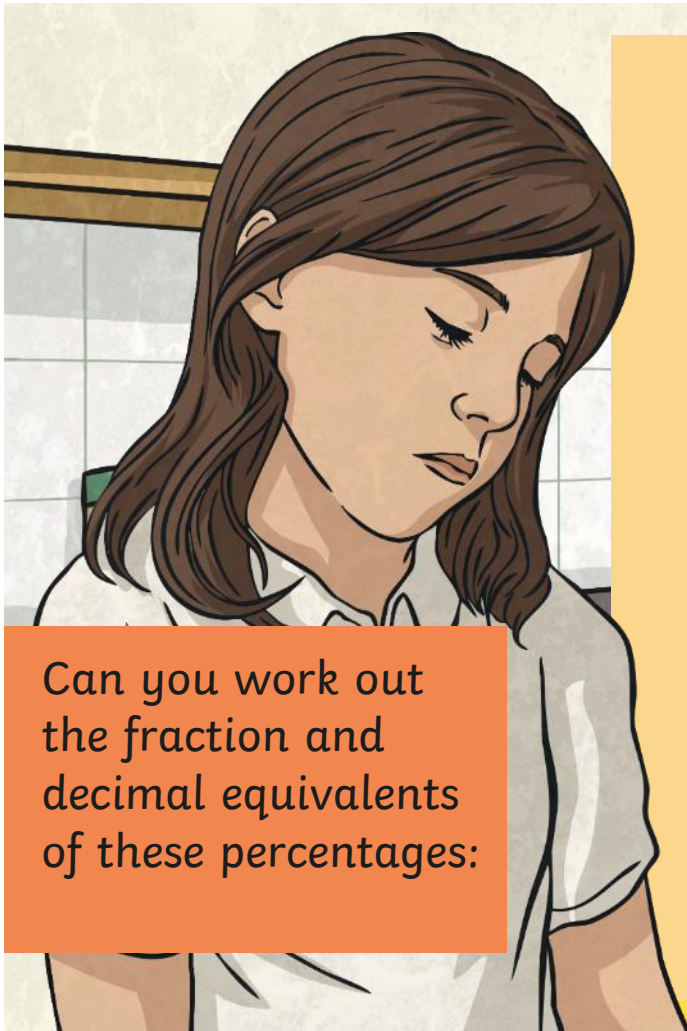
7%

0.05

$\frac{1}{100}$



Percentage Equivalents

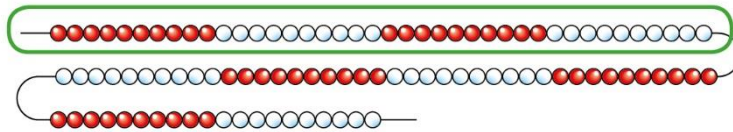


Can you work out the fraction and decimal equivalents of these percentages:

Percentage	Fraction	Decimal
11%	$\frac{11}{100}$	0.11
33%	$\frac{33}{100}$	0.33
70%	$\frac{70}{100}$ or $\frac{7}{10}$	0.7
61%	$\frac{61}{100}$	0.61
10%	$\frac{10}{100}$ or $\frac{1}{10}$	0.1
4%	$\frac{4}{100}$	0.04
1%	$\frac{1}{100}$	0.01

Equivalent F.D.P

- 1 Rosie makes a number on a 100 bead string.



a) What fraction of the bead string is circled?

b) Write the fraction as a decimal.

c) Write the decimal as a percentage.

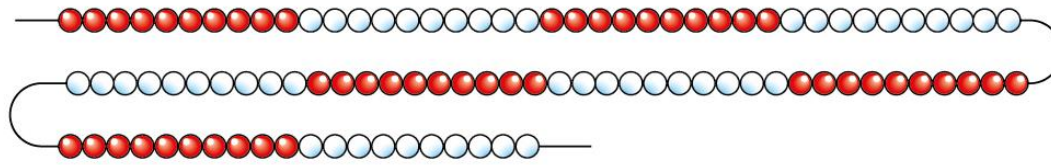
 %

How can we tackle this question from your pack.

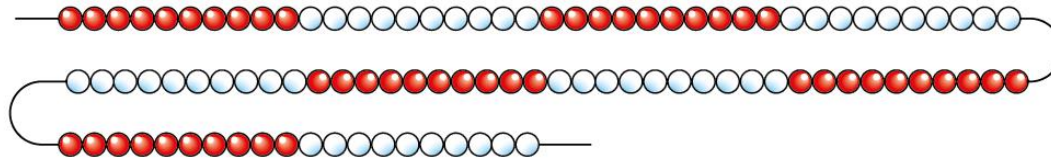
To find the fractions. We know there are 100 beads. This is your denominator.

The red shows you the numerator. Then convert to a percent and decimal.

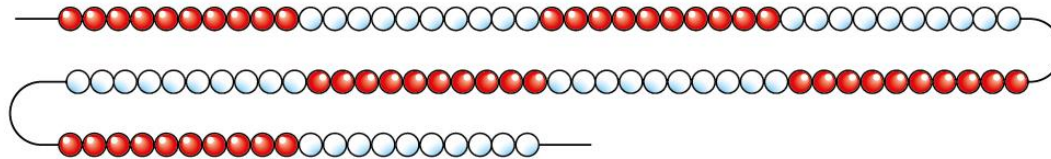
a) 70%



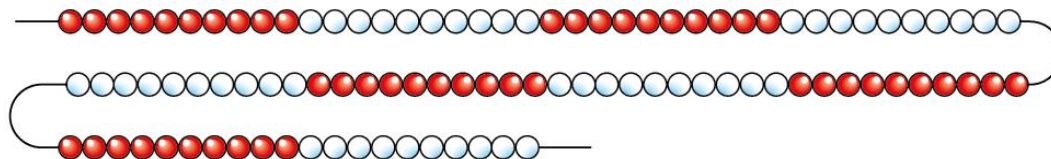
b) 0.08



c) $\frac{45}{100}$



d) 95%

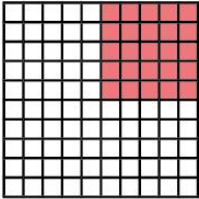
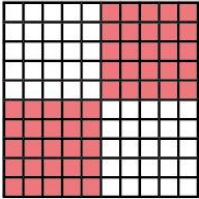
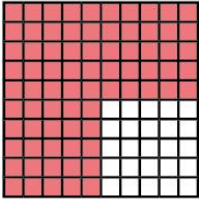


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Now can you draw your own beads to match the fraction, decimal or percent.

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a) What fraction, decimal and percentage of the hundred square is shaded?

Hundred square	Fraction	Decimal	Percentage
			
			
			



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Compare answers with a partner.

Did you get the same answers?

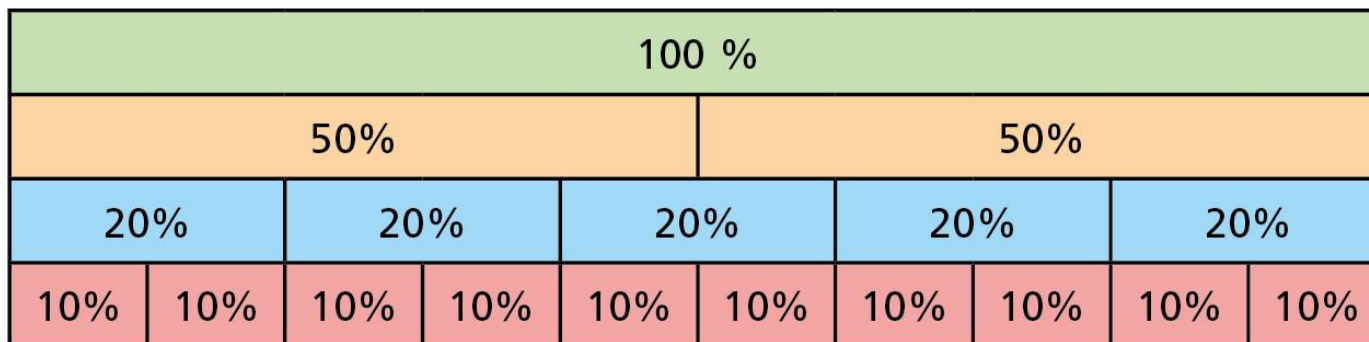
Did you simplify any of your answers?

b) Complete the table.

Quarters	Hundredths	Decimal
$\frac{1}{4}$	$\frac{\boxed{}}{100}$	
$\frac{\boxed{}}{4}$	$\frac{50}{100}$	
		0.75

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Use the diagram to help you complete the equivalence statements.



a) 1 whole = %

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

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

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

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

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

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

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

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

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c) $\frac{1}{10} = \boxed{} = \boxed{} \%$

$\frac{3}{10} = \boxed{} = \boxed{} \%$

$\frac{7}{10} = \boxed{} = \boxed{} \%$

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



5

Filip gets some money for his birthday.

He spends $\frac{2}{5}$ of his money and saves the rest.

What percentage does he save?

 %

6

Dora is doing a school survey.

She compares how many children wear glasses in Class 4 and Class 5

- $\frac{1}{5}$ of the children in Class 4 wear glasses.
- 25% of the children in Class 5 wear glasses.
- Both classes have the same number of children.

Which class has more children who wear glasses? _____

Explain your reasoning.



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There are 30 children in Class 5

- $\frac{2}{5}$ have brown hair.
- 50% have blonde hair.

a) What percentage of children do **not** have brown or blonde hair?

 %

b) What information did you **not** need to know to work out the answer?

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$$\frac{1}{4} = 25\% = \frac{25}{100} = \frac{250}{1000}$$

Use this fact to convert $\frac{1}{8}$ and $\frac{3}{8}$ to decimals.

$$\frac{1}{8} = \boxed{}$$

$$\frac{3}{8} = \boxed{}$$