

# Fractions, decimals and percentages (2)

## National Curriculum attainment target

- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

## Lesson objective

- Swapping between fractions, decimals and percentages

### Previous related lesson

Unit 4, Week 2, Lesson 3

### Prerequisites for learning

Pupils need to:

- understand unit and non-unit fractions
- understand percentages
- understand decimals

### Vocabulary

fraction, decimal, percentages

### Future related lessons

None

### Success criteria

Pupils can:

- look at the two fractions, decimals and percentages
- decide the best way to compare them
- use their knowledge of equivalence
- convert between them when appropriate



## Getting Started

- Choose an activity from Number – Fractions (including decimals and percentages).

**Collins**  
Connect

Year 6, Unit 12,  
Week 2

## Teach

### Resources

mini whiteboard, pen and eraser (per child); calculator (per class)



- Ask: **Why do fractions, decimals and percentages go together mathematically?** Ask some pairs to explain the connection.



- Say: **Tell your partner any equivalent fractions, decimals and percentages that you know. Write them on your board.** Ask pairs to share their answers, record them on the board.

- Write  $1\% = \frac{1}{100} = 0.01$  on the board and discuss the connection between them.

- Display: Slide 1.



- Say: **Choose two of these percentages and write the equivalent fraction and decimal.**

- Choose one of the percentages and ask any pairs who chose that one to share their answers. Write them on the board.



- Say: **Choose two different percentages and write the equivalent fraction and decimal.** Check children's answers. Establish that some percentages have more than one fraction equivalent as the numerator has common factors with the denominator (100). So,  $\frac{75}{100} = \frac{3}{4}$ .

- Model the simplifying of  $\frac{75}{100}$ .



- Display: Slide 2. Ask: **What do all these percentages have in common?**

- Establish that these are the percentage equivalents to eighths. As one hundred divided by eight equals 12.5. Write the equivalent fractions and decimals as a class.



- Ask: **How do we find the equivalent decimal and percentage for a fraction?** Ask a pair to share their method.

- Say: **The numerator is divided by the denominator to find the decimal equivalent.** Model this on the calculator.



- Display: Slide 3 and write five < signs on the board with space either side. Point to two of the amounts and decide as a class on which side of the less than sign they should go.

- Point to another two amounts. Ask: **Where should we place these amounts?** Discuss this as a class.

- Say: **In order to decide where to place the cards we have to compare fractions, decimals and percentages. Sometimes we will know which is greater and sometimes we may need to work it out.**



- Point to another two amounts. Ask: **Where should we place these amounts?** Ask a child to explain their decision.
- Work through the rest of the amounts as a class deciding where to put them.

## Individualised Learning

Refer to Activity 2 from the Learning activities on page 470.

**Pupil Book 6C** – Page 86: Fractions, decimals and percentages (2)

Resources: Resource 71: Fractions, decimals and percentages (per pair); scissors (per child)

**Progress Guide 6** – Extension, Unit 12, Week 2, Lesson 2: Slide into place

Resources: scissors (per child)

## Plenary

### Resources

mini whiteboard, pen and eraser (per child)

- Say: **Write on your whiteboard a fraction, decimal or percentage.**
- Ask children to work in groups of six. Say: **Organise yourselves in order from smallest to largest, depending on what is on your whiteboard.**
- Ask a group to come to the front and stand in their order. Ask the rest of the class to check the order is correct.
- Point to the space between two children. Ask: **What fraction, decimal or percentage could go in here and keep the order?**
- Repeat with a different group.

## Overcoming Barriers

- In order to work out the connections between fractions, decimals and percentages, children need to have a secure understanding of each of them. In particular they need to understand how they all relate to hundredths. Focus on whichever area they are unsure of.