

Percentage and prices

National Curriculum attainment target

- Solve problems involving the calculation of percentages (for example, of measures, such as 15% of 360) and the use of percentages for comparison

Lesson objective

- Solve and compare percentages problems

Previous related lesson

Unit 4, Week 2, Lesson 4

Prerequisites for learning

Pupils need to:

- understand percentage and fraction equivalents
- be able to divide by 100

Vocabulary

- percentage, sale, reduce

Future related lessons

None

Success criteria

Pupils can:

- read the percentage
- work out using a known fraction, if possible
- divide the amount by 100, and multiply if needed
- reduce the price by the given per cent



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)



- Ask: **What are percentages?** Ask pairs to share what they know with the class.

- Establish that percentages are a way of representing amounts less than a whole or of a whole.

- Display: Slide 1. Say: **25 600 is the start number, it is one hundred per cent.**

- Say: **There are two ways to work out percentages: either multiply by the equivalent fraction, or work out one per cent (by dividing by 100) and multiply this by the per cent that you want to find out.**



- Say: **Look at the percentages on the board and choose two to work out.**

- Ask: **Out of these percentages which ones would you work out using the equivalent fraction?** Ask a pair to share their suggestion and to talk through how they worked it out. Write their working out on the board.



- Ask: **Which of these percentages would you work out by finding one per cent and multiplying it?** Ask another pair to share their suggestion and their working out.



- Say: **Choose two of the percentages and work them out; choose one where you can use an equivalent fraction and one where you need to find 1% and multiply.** Check children's answers and methods.



- Display: Slide 2. Read the problem to the class.

- Ask: **How will you work this out?** Ask some pairs to share their ideas.

- Some children may suggest working out 30% and subtracting this. Discuss this as a class, establish that this will not give the correct answer as the sale price is different every day, so every day the value of the 10% will change.

- Say: **We need to work out the price on a day to day basis, as the amount it is reduced by will change every day.**

- Say: **Work out the price for the first three days.** Work through this as a class. Model the way you would like children to lay out their working out.

- Ask: **What did you notice about the value of the 10% reduction each day?** Establish that every day the value of the 10% is less.

- Ask: **How much has the price been reduced by day three?** Compare the original price and the price on day three.

i A shop is closing down and wants to sell everything in the next two weeks. The manager decides to have a sale and reduce everything by 10% each day. A child's bike is priced at £240 before the sale. What will the price be on day three?





- Ask a child to share their answer.

- Display: Slide 3.

- Say: **Work out the price of the trainers on day three.**

- Ask some children to share their working out and the rest of the class can check their answers and methods.



- Display: Slide 4. Ask children to work out the price of the cricket bat on day three, if appropriate.

- Ask: **Do you think it would be better to buy the trainers after three days when the price has been reduced by 10% each day, or to buy them on the first day with a reduction of 25%?**

- Ask some pairs to share their suggestions, and discuss as a class.

Individualised Learning

Refer to Activity 1 from the Learning activities on page 470.

Pupil Book 6C – Page 84: Percentages and prices
Progress Guide 6 – Support, Unit 12, Week 3, Lesson 1:
 Sale prices

Plenary

Resources

mini whiteboard, pen and eraser (per child)



- Ask: **If you were a shop owner and wanted to have a sale in your shop, how would you do it? Remember, even if you are reducing prices you still want to make as much money as you can.**
- Children who have worked on Challenge 3 will already have considered this question. Ask them to be ready to share their ideas.
- Ask some pairs to feedback and discuss them as a class.
- Ask children to be critical as to whether they think they are good strategies or not.
- Choose three different ideas and vote as a class about which they think will be the most successful.
- Ask some children to explain the reasons for their choice.



Homework Guide 6

Year 6, Unit 12, Week 2, Lesson 1:
 Going down

Overcoming Barriers

- Children will not be able to work out percentages of amounts if they do not have an understanding of percentages and the equivalent fractions. Spend more time on this if needed.