

Written subtraction (2)

National Curriculum attainment targets

- Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction)
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Lesson objectives

- Subtract whole numbers with five and six digits using the formal written method (decomposition)
- Use rounding to check answers

Previous related lesson

Unit 5, Week 1, Lesson 2

Prerequisites for learning

Pupils need to:

- use the formal written method with four-digit numbers

Vocabulary

column subtraction, place value, rounding

Future related lessons

Unit 9, Week 2, Lesson 2; Unit 11, Week 1, Lesson 2

Success criteria

Pupils can:

- write out the calculation correctly
- subtract each column
- change the columns when needed



i Throughout the lesson ensure that the digits are referred to by their place value not just as a one-digit number. So in 15728, the digit 7 must be referred to as 700.

i Read each calculation before working it out to ensure that children are aware of the whole number and are not just focusing on columns.

Getting Started

- Choose an activity from Number – Addition and subtraction.
- Choose a game or activity from *Fluency in Number Facts: Y5/Y6* – Addition and subtraction.

Teach

Resources

← mini whiteboard, pen and eraser (per child)



- **Ask: What are three key things that help us remember how to be successful at the formal written method?**
- Ask some pairs to share their ideas. Record them on the board for children to refer to in the lesson.
- Display: Slide 1.
- Say: **Work out the calculation using the column method.**
- Watch the children's working out and notice any steps that children are unsure of.
- Work through the calculation as a class, asking different pairs to explain what needs to be done next and why. Focus on any aspects you have noticed the class found tricky.
- Say: **Now let's check our answers by rounding the numbers in the calculation.**
- Ask: **What is 42578 rounded to the nearest multiple of 100?** Write 42 600 on the board.
- Ask: **What is 28392 rounded to the nearest multiple of 100?** Write 28 400 on the board.
- Say: **Work out 42 600 subtract 28 400 and use the answer to check your calculation.**
- Display: Slide 2.
- Say: **Remember to work neatly so you can see when you need to change any of the columns.**
- Say: **Work out this calculation together.**
- Watch the children's working out and notice any steps that children are unsure of.
- Work through the calculation with the class, asking different children to explain what needs to be done next and why.



i Remind children to estimate and check the answer to the calculation.





- Display: Slide 3.
- Say: **We can use our understanding of the formal written method to subtract six-digit numbers.**
- Say: **Work out this calculation together. You need to work very carefully.**
- Work through the calculation as a class. Clearly model how you would like the calculation laid out.
- Write on the board: $328436 - 163719 =$
- Say: **Work out this calculation.**
- Work through the calculations as a class. Use rounding to check answers. Focus on any aspects children have found challenging.

Individualised Learning

Refer to Activity 3 from the Learning activities on page 227.

Pupil Book 5B: – Page 16: Written subtraction (2)
Progress Guide 5: – Support, Year 5, Unit 5, Week 2, Lesson 3: 4-digit subtraction

Plenary



- Say: **Look at the key things we recorded that support being successful at the formal written method.**
- Ask: **Do you think we need to add or change anything?**
- Ask a pair to share an idea. Ask the rest of the class to consider it and, if there is agreement, adapt the list accordingly.
- Repeat with the ideas of several more pairs.
- Ask: **When is the formal written method the best method to use?** Discuss as a class. Establish that it is the best method for calculations that cannot be done mentally.



Homework Guide 5

Year 5, Unit 5, Week 2, Lesson 3:
Using the formal written method

Overcoming Barriers

- If children are making mistakes with the formal written method it indicates they do not have a secure understanding of why the method works. Stay with four-digit numbers and show the subtracting of each column separately alongside the written method so children can see the place value of each answer clearly, e.g. $500 - 200$.