Division facts for the 8 multiplication table

National Curriculum attainment target

- Recall and use division facts for the 8 multiplication table

Lesson objective

- Use halving to recall the division facts for the 8 multiplication table

Previous related lessons

Unit 4, Week 2, Lesson 3; Unit 6, Week 1, Lesson 1

Prerequisites for learning

Pupils need to:

- count from 0 in multiples of 4 and 8
- understand the concept of half

Vocabulary

multiple, half, divided by, division

Future related lesson

Unit 6, Week 1, Lesson 4

Success criteria

Pupils can:

- use halving to recall the division facts for the 8 multiplication table
- recall all the division facts for the 8 multiplication table

Getting Started

- Choose an activity from Number – Multiplication and division.
- Choose an activity from *Fluency in Number Facts*: *Y3/Y4* – Multiplication and division.

Collins Connect
Year 3, Unit 6, Week 1

Teach

- Say: **We have used our knowledge of multiplication facts to help us work out the answers to the division facts for the 8 multiplication table. Today we are going to learn another strategy to help us work out the division facts for the 8 multiplication table. Just as doubling can help us learn the 4 and 8 multiplication facts, we can use the inverse of doubling, which is halving, to help us with division**.
- Display: Slides 1–4.
- Show Slide 1 and ask: **What division facts can we write for this array?** (24 ÷ 8 = 3; 24 ÷ 3 = 8)
- Say: **Discuss with your partner how we can divide 24 by 8 in our head using halving.**
- Say: **To divide 24 by eight, we can first halve 24,** (demonstrate drawing a line vertically through the middle of the array to show the division in half) **then divide each half in half again,** (demonstrate drawing a line through the middle of one of the halves) **then divide each half in half again.** (demonstrate drawing a line vertically through the middle of one of the halves)
- Say: **If we halve 24, the answer is 12, if we halve it again, the answer is six and if we halve it again, the answer is three.** Write 12, 6 and 3 under the appropriate section of the array. Say: **24 ÷ 8 = 3.**
- Repeat the process with the remaining arrays: 5 by 8 array; 6 by 8 array; 9 by 8 array.
- At appropriate intervals, ask children to discuss how to work out the division fact for the 8 multiplication table represented by the array using the halving strategy.
- Write a division fact related to the 8 multiplication table on the board, for example, 56 ÷ 8. Ask: **Who can tell me the answer to this question and explain how to find it using the halving strategy?** Repeat with other examples.

Ask children to divide two- or three-digit multiples of eight beyond 80 by eight using the halving strategy, for example, 128 ÷ 8 (128 ÷ 2 = 64; 64 ÷ 2 = 32; 32 ÷ 2 = 16 so 128 ÷ 8 = 16).

Individualised Learning

Refer to Activity 1, 2, 3 and 4 from the Learning activities on pages 242–243.

Pupil Book 3B – Page 18: Halving to find the division facts for the 8 multiplication table

Progress Guide 3 – Support, Year 3, Unit 6, Week 1, Lesson 3: Halving to find division facts (2)

Plenary

Resources

mini whiteboard, pen and eraser (per child)

- Write a multiple of eight greater than 20 on the board, for example, 64. Ask children to halve the number, halve it again and halve it again. They write the answer on their mini whiteboard (eight) and display it when asked.
- Repeat with further examples, including even numbers to 100 that are multiples of 8. Use this as an opportunity to check children's understanding of the concept of repeated halving.
- Write a division fact related to the 8 multiplication table on the board, for example, 48 ÷ 8.
- Ask children to discuss with a partner how to work out the division facts for the 8 multiplication table, using the halving strategy.
- Ask: **Who can tell me the answer to this question and explain how to find it using the halving strategy?** Repeat with other examples.

Overcoming Barriers

- If children find this strategy difficult, they may need support with halving numbers. Review halving even numbers to 100.