

Division – finding quarters

National Curriculum attainment targets

- Solve one-step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher
- Understand multiplication and division through grouping and sharing small quantities

Lesson objective

- Find simple fractions of objects, numbers and quantities – quarters

Previous related lessons

Unit 3, Week 2, Lessons 1–4; Unit 4, Week 2, Lessons 1–4; Unit 6, Week 2, Lessons 1–4; Unit 8, Week 2, Lessons 1–4; Unit 10, Week 2, Lessons 1–4; Unit 12, Week 1, Lessons 1 and 2

Prerequisites for learning

Pupils need to:

- understand the vocabulary and concept of ‘quarters’
- understand that sharing equally means that each set must be exactly the same
- count sets of up to, at least 20

Vocabulary

share, divide, equal, equal groups, how many?, groups, groups of, equally, quarter

Future related lessons

Unit 12, Week 1, Lesson 4; Unit 12, Week 2, Lessons 1–4

Success criteria

Pupils can:

- find one-quarter of a number or quantity
- understand division through sharing small quantities 0–20/30



Getting Started

- Choose an activity from Number – Multiplication and division.
- Choose a game or activity from *Fluency in Number Facts: Y1/Y2 – Multiplication and division*.

Collins
Connect

Year 1, Unit 12,
Week 1

Teach

Resources

mini whiteboard, pen and eraser (per pair)

- Remind the children that they have already learned about halves. Say: **If we share something equally between two, we are halving it. We are splitting, or dividing, it into two parts that are exactly the same size.**
- Say: **When something is shared equally between four, each of the four parts is called a quarter. It is divided into four parts that are exactly the same size.**
- Ask: **Can you remember how we write a quarter in numbers and words?**
- Display: Slide 1 showing ‘quarter’ and $\frac{1}{4}$.
- Display: Slide 2 showing the four pirates and the closed treasure chest. Say: **The pirates are going to share the treasure, but they must make sure that they share it equally.**
- Ask: **How will they share the treasure? In halves?** Encourage the children to suggest that the treasure will be shared into quarters because there are four pirates who will each have an equal share.
- Click to open the treasure chest to show 12 coins to be shared between the pirates.
- Ask: **How can we share the treasure fairly between the pirates?**
- Ask the children for their suggestions and then click to share the treasure so that each pirate has three coins. Say: **12 shared equally between 4 is 3 each. One quarter of 12 is 3.**
- Say: **If we want to find half of a number, we share it equally between two. If we want to find one-quarter, then we share it equally between four.**
- Display: Slide 3 showing eight coins into the treasure chest and say: **Work together to find out how many coins each pirate will get. Write your answer on your whiteboard and hold it up.**



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- Choose individual pairs to suggest the answer, and explain their working, before clicking to share two coins to each pirate.
- Say: **One quarter of 8 is 2. Four lots of 2 makes 8. 8 shared between 4 is 2.**
- Display: Slides 4–7 and repeat several times in the same way, using 16, 20, 24 and 28 coins each time, and asking the children to work together to find one quarter of each number.

4–7



Adjust the range of numbers used as appropriate. For example, if the children are confident in finding one quarter of all multiples of 4 from 0–20, then extend the range to include numbers 20–30, or more if appropriate.

If some children are still struggling with finding quarters for numbers 0–20 (4, 8, 12, 16 and 20), revisit numbers 0–10 first (4 and 8).

Individualised Learning

Refer to Activity 3 from the Learning activities on page 453.

Activity Book 1C – Page 40: Treasure troves

Resources: counters, if needed

Progress Guide 1 – Support, Year 1, Unit 12, Week 1, Lesson 3: Fraction flags

Plenary

Resources

20 counters (per pair)

- Show the children the counters and say: **I have 20 counters. Can you share them equally between four? How many counters will be in each quarter?** (5)
- Repeat several times, using different amounts each time. The children may choose their counters to support their working.
- Display: Slide 1. Remind the class that when a number or object is divided into four equal parts, each part is one quarter of the whole. Point to $\frac{1}{4}$ and say: **It means one part** (point to the 1) **of four.** (point to 4)
- Display: Slides 2–7 showing several sets of treasure (in multiples of 4).
- Ask two children to volunteer to stand in front of the class. Draw attention to the collections of treasure, and say: **If I give one quarter of this treasure** (point to one set) **to** (point to one of the volunteers) **how many coins will he or she have? How much will be left? If I give this** (point to another set) **to** (point to the other volunteer), **how many coins will he or she have? How much will be left?**
- Remind the class that when a number or object is divided into two equal parts, each part is one half, or $\frac{1}{2}$, of the whole.
- Remind the class that when a number or object is divided into four equal parts, each part is one quarter, or $\frac{1}{4}$, of the whole.

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2–7