# Solving money problems

# National Curriculum attainment target

• Use all four operations to solve problems involving measure [for example, money] using decimal notation, including scaling

# Lesson objective

• Use all four operations to solve problems involving money using decimal notation, including scaling

## Previous related lessons

Unit 12, Week 2, Lesson 1; Unit 12, Week 2, Lesson 2; Unit 12, Week 2, Lesson 3

## Prerequisites for learning

## Pupils need to:

 $\bullet$  recall multiplication and division facts for multiplication tables up to 12  $\times$  12 and associated facts involving multiples of 10, 100 and 1000

#### Vocabulary

operation, multiple, multiplication, factor, division, addition, subtraction, decimal, fraction, equals

## Future related lessons

None

## Success criteria

Pupils can:

- recognise the operation needed to answer a word problem
- write the calculation necessary to answer the problem
- write the correct answer to the problem



Connect

Year 5, Unit 12,

# **Getting Started**

- Choose an activity from Number Multiplication and division including measurement (money).
- Choose a game or activity from Fluency in Number Facts: Y5/Y6 Multiplication and division.

## Teach

1

- Say: We are going to look at some word problems involving money. The word problems could involve multiplication, division, addition or subtraction. You need to picture the situation in your mind to help you work out which operation you will need and then work out the answer.
- Display: Slide 1 showing the first word problem: The Harper family are going to Spain on holiday. They have allocated £1865 for their flight tickets. If there are four family members, how much is allocated for tickets per person?
- Discuss the problem with the class and refer to the image to help children visualise the scenario.
- Ask: What information is important to working out the answer? (£1865 for tickets, 4 family members, how much for tickets per person?) Underline the relevant information.
- Ask children to share with their partner what image(s) they have visualised.
- Ask: What maths operation do we need to use to find the answer? (+)
- Ask: What is the calculation required? (1865  $\div$  4 = ) Write this on the whiteboard.
- Ask: What is the approximate answer? How did you work this out?
- Ask: Which method would you use to work out the answer? (Children should recognise the need for the formal written method of short division.)
- Encourage children to explain the method used, e.g.

Th H T O · t h

- Ask: What is the answer? (£466.25)
- Explain that to answer the question properly we need to read the problem again.
- Ask: What is the problem asking us to find out? (How much is allocated for tickets per person.) What is the answer to the problem? (£466.25 is allocated for tickets for each person.)

• Display: Slides 2-4. Repeat above for the remaining three problems.

- **2** The Harper family decide to book in at a hotel at the airport the night before they travel. The cost per person is £87. What is the total cost for the hotel stay?
- **3** There are 376 people booked on the plane. Each row of seats holds 6 people. How many rows are needed so everyone has a seat?
- **4** Mary receives £15 per month pocket money. She has been saving her pocket money each month for the year to take on holiday. How much money has she saved altogether?



2-4

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- Ask children to share with their partner what image(s) they have visualised for each example.
- Ask children each time to explain why they have chosen the operation and discuss whether the operation chosen is the correct one.

# Individualised Learning

Refer to Activities 1–4 from the Learning activities on page pages 464 to 465.

Pupil Book 5C: – Page 90: Solving money problems Progress Guide 5: – Extension, Year 5, Unit 12, Week 2, Lesson 4: Solving word problems

# Plenary

- Write a calculation on the board, e.g. 1376 ÷ 4 = . Ask: Who can make up a problem to match this calculation?
- In pairs, children should discuss their word problems.
- Ask pairs to share one of their word problems with the class. Discuss whether the word problem matches the calculation. Ask for another word problem from a different pair of children.
- Ask: How would the word problem change if the calculation was changed to 1376 × 4 =

   (Answers will vary depending on the word problem originally suggested.)
  - Repeat the process with different calculations.

Homework Guide 5

Year 5, Unit 12, Week 2, Lesson 4: Solving money problems

## **Overcoming Barriers**

• Children may have difficulties recognising some of the calculations required to answer word problems. Encourage them to visualise and draw a picture of what is happening to assist their understanding.