

Reasoning and Problem Solving

Step 5: Find a Quarter

National Curriculum Objectives:

Mathematics Year 2: (2F1a) [Recognise, find, name and write fractions \$\frac{1}{3}\$, \$\frac{1}{4}\$, \$\frac{2}{4}\$ and \$\frac{3}{4}\$ of a length, shape, set of objects or quantity](#)

Mathematics Year 2: (2F1b) [Write simple fractions for example, \$\frac{1}{2}\$ of \$6 = 3\$](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Find one quarter of 3 different numbers and match to the correct answers in order to find the odd one out. Pictorial support provided with the use of a dividing line to show the quarters.

Expected Find one quarter of 3 different numbers and match to the correct answers in order to find the odd one out. Pictorial support provided.

Greater Depth Find one quarter of 3 different numbers and match to the correct answers in order to find the odd one out. No pictorial support provided.

Questions 2, 5 and 8 (Reasoning)

Developing Explain if one quarter of a number has been correctly found. Pictorial support provided with the use of a dividing line to show the quarters.

Expected Explain if one quarter of a number has been correctly found. Scaffolding provided i.e. dividing the number by 2 and then by 2 again.

Greater Depth Explain if the answer to a two-step problem is correct. Problem involves finding one quarter of a number. No pictorial support or scaffolding provided.

Questions 3, 6 and 9 (Problem Solving)

Developing Using a clue involving one quarter of a number, find 3 possible answers. Pictorial support provided with the use of a dividing line to show the quarters.

Expected Using a clue involving one quarter of a number, find 3 possible answers. Pictorial support provided.

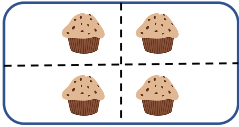
Greater Depth Using a clue involving one quarter of a number, find 3 possible answers. No pictorial support provided.

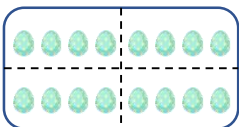
More [Year 2 Fractions](#) resources.

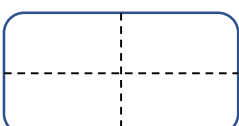
Did you like this resource? Don't forget to [review](#) it on our website.

Find a Quarter

1a. Using the images to help, match the fractions to their answer.

A.  $\frac{1}{4}$ of 4 4

B.  $\frac{1}{4}$ of 16 1

C.  $\frac{1}{4}$ of 0 0


2

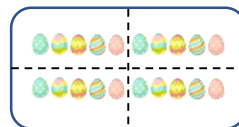
 Which number is the odd one out?


PS

Find a Quarter

1b. Using the images to help, match the fractions to their answer.

A.  $\frac{1}{4}$ of 8 4

B.  $\frac{1}{4}$ of 20 2

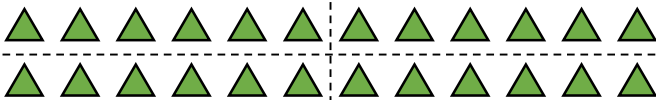
C.  $\frac{1}{4}$ of 12 5

3

 Which number is the odd one out?

PS

2a. Who is correct? Explain your answer.



Tara

$\frac{1}{4}$ of 24 is 12.

$\frac{1}{4}$ of 24 is 6.

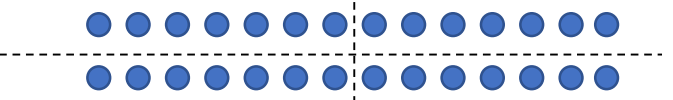


Sam



R

2b. Who is correct? Explain your answer.



Lola

$\frac{1}{4}$ of 28 is 7.

$\frac{1}{4}$ of 28 is 14.



Harry



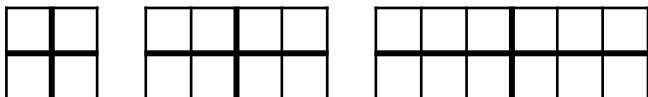
R

3a. Samuel is thinking of a number. What could the number be?



$\frac{1}{4}$ of my number is less than 4.

Shade $\frac{1}{4}$ of these images to help you.



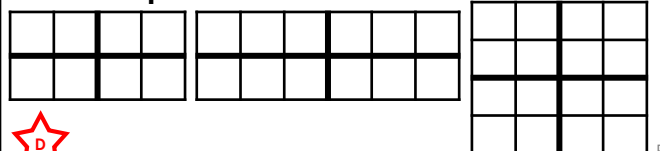
PS

3b. Declan is thinking of a number. What could the number be?



$\frac{1}{4}$ of my number is more than 1 but less than 5.

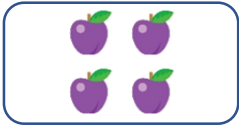
Shade $\frac{1}{4}$ of these images to help you.




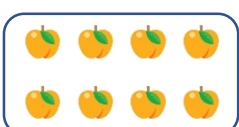
PS

Find a Quarter

4a. Using the images to help, match the fractions to their answer.

A.  $\frac{1}{4}$ of 4 3

B.  $\frac{1}{4}$ of 12 1

C.  $\frac{1}{4}$ of 8 2

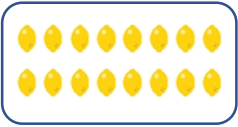
4

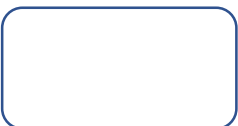
★ Which number is the odd one out?


PS

Find a Quarter

4b. Using the images to help, match the fractions to their answer.

A.  $\frac{1}{4}$ of 16 4

B.  $\frac{1}{4}$ of 0 1

C.  $\frac{1}{4}$ of 20 5

0

★ Which number is the odd one out?

PS

5a. Is Layla correct? Explain your answer.



One quarter of £24 is £7 because half of 24 is 14 and half of 14 is 7.

★

R

5b. Is Peter correct? Explain your answer.

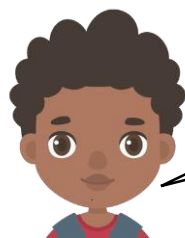


One quarter of 28p is 12p because half of 28 is 24 and half of 24 is 12.

★

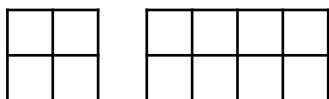
R

6a. Declan is thinking of a number. What could the number be?



$\frac{1}{4}$ of my number is less than 4.

Shade $\frac{1}{4}$ of these images to help you.



★

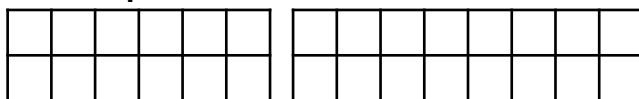
PS

6b. Sandeep is thinking of a number. What could the number be?



$\frac{1}{4}$ of my number is more than 2 but less than 6.

Shade $\frac{1}{4}$ of these images to help you.



★

PS

Find a Quarter

Find a Quarter

7a. Match the fractions to their answers.

A.	$\frac{1}{4}$ of 12	1
B.	$\frac{1}{4}$ of 4	3
C.	$\frac{1}{4}$ of 8	2
		4

★ Which number is the odd one out?

PS

7b. Match the fractions to their answers.

A.	$\frac{1}{4}$ of 16	4
B.	$\frac{1}{4}$ of 20	5
C.	$\frac{1}{4}$ of 0	0
		1

★ Which number is the odd one out?

PS

8a. Is Freya correct? Explain your answer.



I had 16 sweets. I ate one quarter of them so now I have 10 left.



R

8b. Is Kai correct? Explain your answer.



I had 24 marbles. I have lost one quarter of them so now I have 18 left.



R

9a. Bethany is thinking of a number. What could the number be?



$\frac{1}{4}$ of my number is more than 2 but less than 6.



PS

9b. Harry is thinking of a number. What could the number be?



$\frac{1}{4}$ of my number is an even number less than 8.



PS

Reasoning and Problem Solving

Find a Quarter

Developing

1a. A. 1; B. 4; C. 0

2 is the odd one out.

2a. Sam is correct. Half of 24 is 12 but one quarter is 6.

3a. 4, 8 or 12

Expected

4a. A. 1; B. 3; C. 2

4 is the odd one out.

5a. Layla is incorrect. Half of 24 is 12 so one quarter of 24 is 6.

6a. 4, 8 or 12

Greater Depth

7a. A. 3; B. 1; C. 2

4 is the odd one out.

8a. Freya is incorrect. One quarter of 16 is 4. $16 - 4 = 12$ so Freya has 12 sweets left.

9a. 12, 16 or 20

Reasoning and Problem Solving

Find a Quarter

Developing

1b. A. 2; B. 5; C. 3

4 is the odd one out.

2b. Lola is correct. Half of 28 is 14 but one quarter is 7.

3b. 8, 12 or 16

Expected

4b. A. 4; B. 0; C. 5

1 is the odd one out.

5b. Peter is incorrect. Half of 28 is 14 so one quarter of 28 is 7.

6b. 12, 16 or 20

Greater Depth

7b. A. 4; B. 5; C. 0

1 is the odd one out.

8b. Kai is correct. One quarter of 24 is 6. $24 - 6 = 18$ so Kai has 18 marbles left.

9b. 8, 16 or 24