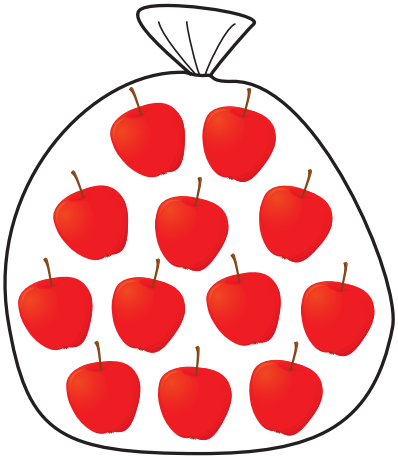
1 Max buys a bag of **12** apples.



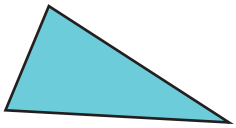
He eats **2** apples **every day**.

How many **days** does it take Max to eat all of the apples?

[ ] days

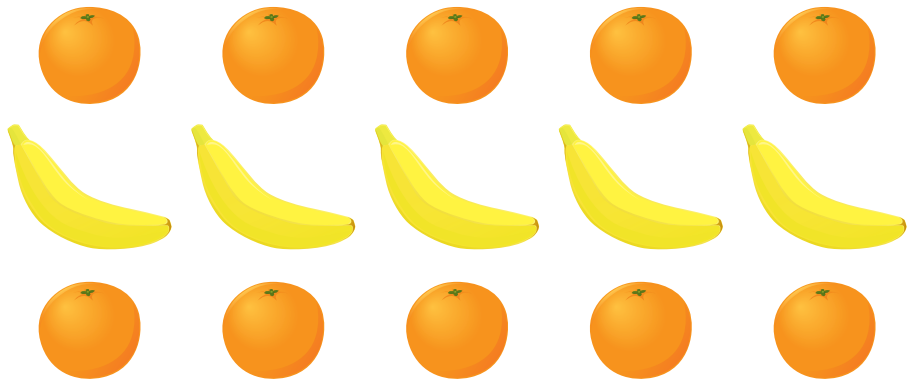
1 mark

2 Write the number of **sides** for each shape.

Shape	Number of sides
	
	
	

1 mark

3



There are **15** pieces of fruit altogether.

What **fraction** of the fruit is bananas?

Circle the correct fraction below.

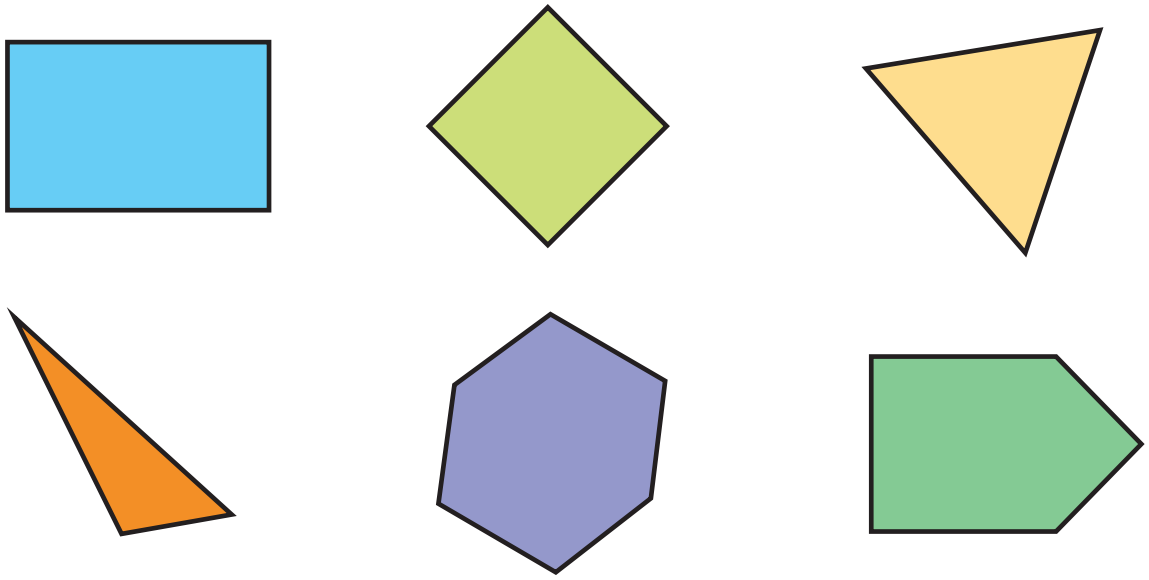
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$ $\frac{3}{4}$

1 mark

Question 1 is a sample aural question. The aural questions appear in the Teacher Guide. The other sample questions are not aurally administered.

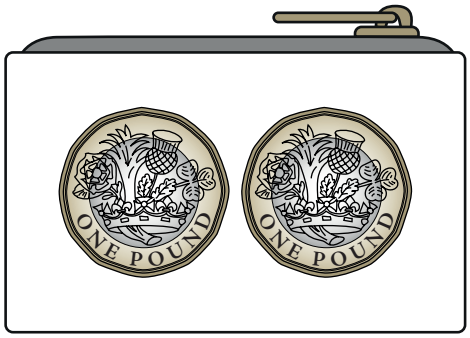
The teacher reads: *Tick the **two** triangles.*

1 Tick (✓) **two**.

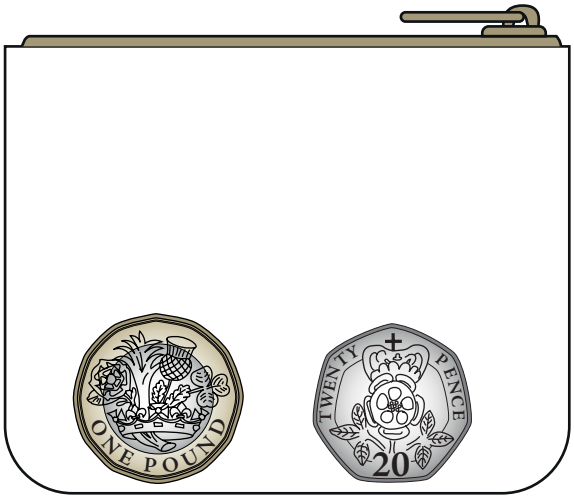


1 mark

2 Max has:



Tick (✓) the purse that has the **same** amount of money as Max.



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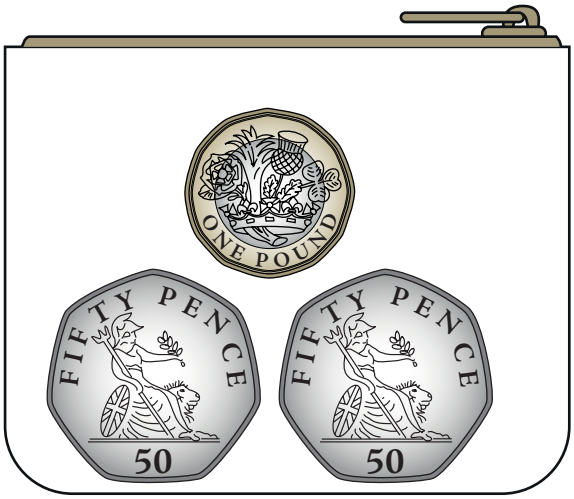

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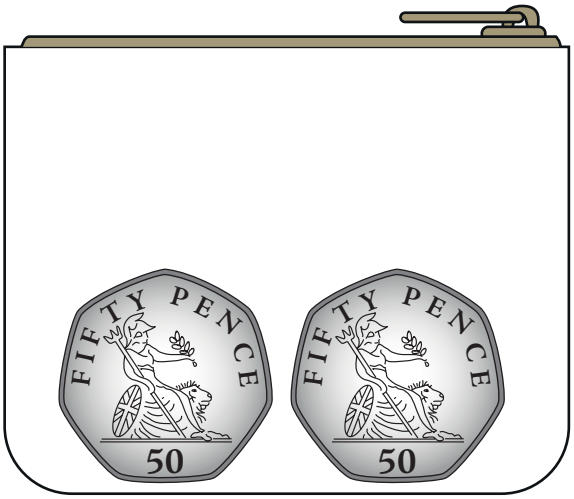


☐

1 mark

3

Zara, Tim and Emma blow **10** bubbles each.

How many bubbles do they blow **altogether**?

bubbles

1 mark

4 A family goes to the cinema.

They buy **1 adult** and **2 child** tickets.

They pay with a **£20** note.

How much change does the family get?

Show your working:

£

2 marks

Year 2 Sample Reasoning Paper Mark Scheme

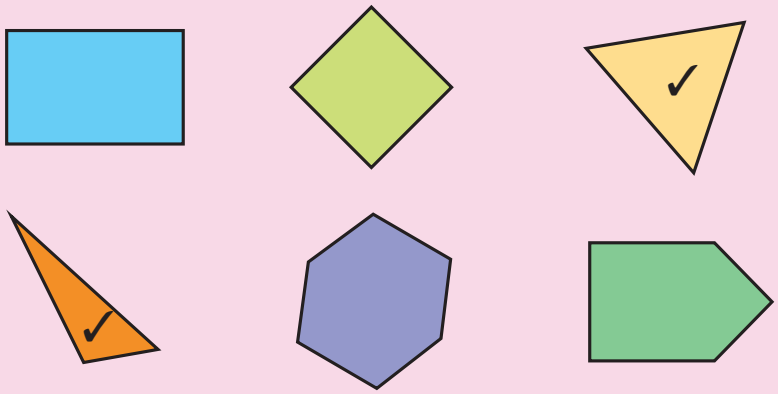
1

PoS	
G	*Recognise and name common 2-D shapes [e.g. rectangles (including squares), circles and triangles]*

1m

Award **1 mark** for:

➤ **both** correct shapes ticked as shown:



Accept:

➤ any other clear way of indicating the two correct shapes, such as circling or underlining

Do not accept:

➤ if additional incorrect shapes are ticked

Diagnostic commentary	
Correct	**90%**
Overview of performance	Most pupils were able to answer this question correctly, showing that the vast majority are confident recognising triangles. Hardly any pupils ticked the hexagon or the pentagon (1% each). Pupils were more likely to be distracted by the shapes with fewer sides, ie the rectangle or square. This could suggest that pupils are associating triangles with a small number of sides, and so are able to confidently disregard the hexagon and pentagon as having too many sides.
Common error 1	**One triangle ticked** 3 per cent of pupils made this error A common incorrect response was to tick only one of the two required triangles and no other. This error was made by a small number of pupils, but prevented them from getting a mark. This suggests an opportunity to remind pupils to carefully read the question, ensuring they understand all requirements. It would also be beneficial for pupils to be encouraged to evaluate every option in a multiple choice question, ie continuing to read all options even when they believe they have found the correct answer(s).
Common error 2	**Scalene triangle not identified** 8 per cent of pupils made this error Pupils were more likely to select the yellow equilateral triangle than the orange scalene triangle. This was seen both where pupils only selected one triangle and where pupils selected a correct and incorrect triangle. This indicates an opportunity to build on pupils' ability to identify triangles, exposing them to triangles of different shapes and sizes, in particular scalene triangles.

II 2

PoS M	*Find different combinations of coins that equal the same amounts of money*

1m

Award **1 mark** for:

➤ the correct purse ticked as shown:

☐ ☐

☐ ☑

Accept:

➤ any other clear way of indicating the correct purse, such as circling or underlining

Do not accept:

➤ if additional incorrect purses are ticked

Diagnostic commentary	
Correct	**55%**
Overview of performance	Over half of all pupils were able to answer this question correctly. It tells us about pupils' ability to identify the same amount of money, using a different combination of coins.
Common error	**Selecting the purse with a £1 and 20p coin**
	23 per cent of pupils made this error
	Just under a quarter of pupils incorrectly chose the top left purse. A further 10 per cent selected the purse containing two 50p coins (bottom right). These pupils tended to do less well on the assessment overall. One possible explanation for this is that pupils are matching by sight, selecting the purses with the same number of coins as in the question image. The £1.20 option may be most appealing as it contains a £1 coin, as does the question image. This suggests that pupils would benefit from further practice looking at the value of coins and finding the total value of coin sets by counting mixed coins.

3	PoS C	*Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts; and* *Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers*

1m

Award **1 mark** for:

➤ 30

Diagnostic commentary	
Correct	**79%**
Overview of performance	Pupils, in general, did well on this question. It tells us about their ability to solve problems involving the 10 multiplication table. The majority of pupils (72%) did not provide a written strategy but still answered the question correctly, suggesting they are confident mentally solving multiplication problems involving 10.
Specific aspect of performance	**a written attempt at grouping strategy**
	3 per cent of pupils used a strategy
	Of the pupils who did use a written strategy, the most popular was an attempt at grouping (eg 3 circles with 10 dots in them or a 3 by 10 array). Three per cent of pupils used this strategy and most of them also achieved a mark (85%). The pupils using this strategy tended to do less well on the assessment overall, suggesting that it was successful in supporting lower performing pupils to answer the question correctly. Five per cent of pupils gave the answer *20*. It is likely that these pupils were working towards a correct answer but having pictorial support might helped to highlight they had not completed their calculation. This suggests an opportunity to work with lower ability pupils, encouraging them to display their working / use pictorial support with their calculations in order to achieve the mark.

4

PoS
M
C

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change; and

Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

2m

Award **2 marks** for:

➤ 11

1m

Award **1 mark** for:

➤ evidence of appropriate working involving a complete and correct method, which contains no more than one arithmetical error, eg:

- 2 + 2 = 4
  5 + 4 = [incorrect answer]
  20 – [incorrect answer] = [answer in the box]
- 1 adult and 2 children = [incorrect answer]
  20 – [incorrect answer] = [no response]

➤ a partial method giving sight of 9, eg:

- 2 + 2 = 4
  5 + 4 = 9
- 1 adult + 2 child tickets = 9