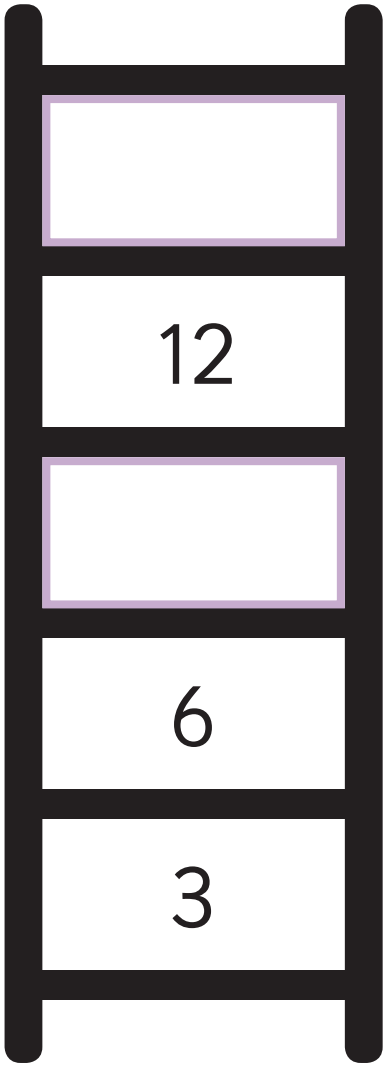
1 Count in **threes** to fill in the missing numbers.

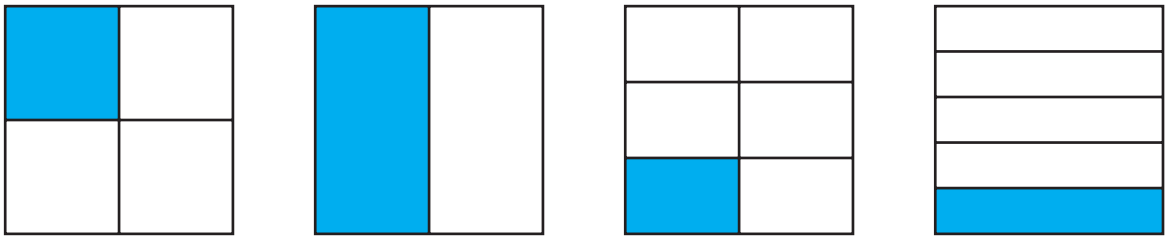


1 mark

2 $10 \times 7 =$ ☐

1 mark

3 Tick (✓) the picture that is $\frac{1}{4}$ blue.



☐ ☐ ☐ ☐

1 mark

4 $28 - 13 =$ ☐

1 mark

1 $58 + 7 =$ ☐

1 mark

2 $93 - 8 =$ ☐

1 mark

3

$10 \times$ ☐ $= 20$

☐ $\times 4 = 20$

$20 \times$ ☐ $= 20$

2 marks

P

Year 2 Sample Arithmetic Paper Mark Scheme

1

PoS C	*Add and subtract numbers using concrete objects and pictorial representations, including:* *• a two-digit number and ones*

1m

Award **1 mark** for:

➤ 65

Diagnostic commentary	
Correct	**68%**
Overview of performance	This question requires pupils to add a two-digit number and ones. Pupils, in general, did well.
Specific aspect of performance	**tens and units drawn**
	10 per cent of pupils used this strategy
	Nearly a fifth of pupils (19%) accompanied their answer with an attempt at a written strategy. The three most common strategies are outlined below. The most common written strategy was drawing tens and units. Of the ten per cent of pupils who did this, over two-thirds also got the correct answer. The second most common strategy, used by three per cent of pupils, attempted to draw single marks on the page but this was less successful, with a 50 per cent success rate. This strategy is arguably less helpful when the operation involves a larger two-digit number as it is easier to lose track of how many marks you have drawn. A strategy of tens and units uses place value to simplify the calculation, therefore increasing accuracy. Finally, a very small number of pupils (2%) used the column method to support their working. In two-thirds of cases this was successful. This suggests an opportunity to discuss with pupils the appropriateness of various strategies, dependant on the numbers involved in a calculation.

2

PoS C	*Add and subtract numbers using concrete objects and pictorial representations, including:* *• a two-digit number and ones*

1m

Award **1 mark** for:

➤ 85

3

PoS	
C	*Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers*

2m Award **2 marks** for **all three** multiplications correct as shown.
1m Award **1 mark** for **any two** multiplications correct as shown:

➤

10	×	**2**	=	20
5	×	4	=	20
20	×	**1**	=	20

Diagnostic commentary	
Correct	**2 marks - 23%** **1 mark - 20%**
Overview of performance	This was one of the more challenging questions in the assessment, with less than a quarter of pupils scoring both available marks. A fifth managed to score one mark by correctly completing two of the three multiplications.
Specific aspect of performance	**adding instead of multiplying**
	17 per cent of pupils made this error for the top multiplication 5 per cent of pupils made this error for the middle multiplication 34 per cent of pupils made this error for the bottom multiplication
	In all three parts of this question some pupils completed an addition rather than a multiplication. Pupils were more likely to add (and get the addition correct) for parts 1 and 3 than for part 2. Overall, two per cent of pupils misread the multiplication symbol as addition in all three question parts and answered *10, 16* and *0*. Part 3 saw the most pupils completing an addition. It is likely that pupils found the final part of the question the most challenging because of an unfamiliarity with the outcome when multiplying a number by 0 or by 1. This particular error suggests an opportunity for pupils to practise multiplying different numbers by 0 and 1. Overall, it would be beneficial to focus on multiplication, familiarising pupils with the symbol, and working with concrete and visual materials to consolidate their understanding of the concept.