

2018 national curriculum tests

Key stage 1

Mathematics test mark schemes

Paper 1: arithmetic

Paper 2: reasoning



Standards
& Testing
Agency

Contents

1. Introduction	3
2. Structure of the test	3
3. Content domain coverage	4
4. Explanation of the mark schemes	5
5. General marking guidance	6
5.1 Applying the mark schemes	6
5.2 General marking principles	6
6. Internal moderation procedures	8
7. Mark schemes for Paper 1: arithmetic	9
8. Mark schemes for Paper 2: reasoning	10
9. Example responses	18
9.1 Examples of responses from question 24	18
9.2 Examples of responses from question 29	20
9.3 Examples of responses from question 30	22

1. Introduction

The Standards and Testing Agency (STA) is responsible for the development and delivery of statutory tests and assessments. STA is an executive agency of the Department for Education.

The 2018 tests assess the national curriculum. This test has been developed to meet the specification set out in the [test framework](#)¹ for mathematics at key stage 1.

A new test and new mark schemes will be produced each year.

The key stage 1 tests will be marked internally within schools to inform teacher assessment.

Scaled score conversion tables are not included in this document. Conversion tables will be produced as part of the standards maintenance process. [Scaled score conversion tables](#)² for the 2018 tests will be published in June 2018.

The mark schemes are provided to use when marking pupils' responses. The pupil examples are based on responses gathered from the test trialling process. It is important, when marking, to refer to the general marking principles, the additional guidance and the exemplars section, to ensure marking is accurate and consistent.

2. Structure of the test

The key stage 1 mathematics test comprises:

- Paper 1: arithmetic (25 marks)
- Paper 2: reasoning (35 marks).

¹ www.gov.uk/government/publications/key-stage-1-mathematics-test-framework

² www.gov.uk/guidance/scaled-scores-at-key-stage-1

3. Content domain coverage

The 2018 test meets the specification in the test framework. Table 1 sets out the areas of the content domain that are assessed in Papers 1 and 2.

The references below are taken from the test framework. A question assessing 2M1, for example, assesses 'compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$ ' and is taken from the year 2 programme of study.

Table 1: Content domain coverage for Paper 1 and Paper 2

Paper 1: arithmetic		Paper 2: reasoning	
Question	Content domain reference	Question	Content domain reference
1	1C2a	1	1N1b
2	2C2b	2	2N3/1N2a
3	2C1	3	2F1a
4	1C2a	4	2C4
5	2C2b	5	2C8
6	2C6	6	1M1
7	1F1a	7	1G1a
8	2N1/2C2b	8	2F1a
9	2C6	9	1P2
10	2N1/2N6	10	2N6
11	2C2b	11	2M4b
12	2C6	12	2C4
13	1C4	13	1N4
14	2C2b	14	2S2b
15	2C6	15	2C7/2C6
16	2C2b	16	1C8
17	2N6/2C2b	17	2G2a
18	2N1/2N6	18	2C8/2M3b
19	2C2b	19	2C9b
20	2C2b	20	2N4
21	2C2b	21	2M4c
22	2F1a	22	2C1/2C2b
23	2C3	23	2M9/2M3a
24	2C6/1N1b	24	2C8/2M9
25	2C2b	25	2M9
		26	2N1
		27	2M2
		28	2C4
		29	2M2/1G1a
		30	2C8/2C4
		31	2C4
		32	2C3/2C4

4. Explanation of the mark schemes

Those marking the tests should familiarise themselves with the marking guidance in section 5 of this document before applying the mark schemes.

The practice questions are not marked as they are completed by the pupils together with the test administrator as an introduction to the test.

The marking information for each question is set out in the form of tables (sections 7 and 8).

The '**Qu.**' column on the left-hand side of each table provides a quick reference to the question number and part.

The '**Requirement**' column may include two types of information:

- a statement of the requirements for the award of each mark, with an indication of whether partial credit can be given for a correct method
- examples of some different types of correct answer.

The '**Mark**' column indicates the total number of marks available for each question part.

The '**Additional guidance**' column indicates alternative acceptable answers, and provides details of specific types of answer that are unacceptable. Other guidance, such as the range of acceptable answers, is provided as necessary.

5. General marking guidance

5.1 Applying the mark schemes

To ensure consistency of marking, the most frequent procedural queries are listed in Table 2, along with the action you should take. Unless otherwise specified in the mark scheme, you should apply these guidelines in all cases.

Example responses are also included for the two working mark questions and one other question in Paper 2: reasoning. These should act as your guide when you are marking these questions.

5.2 General marking principles

Table 2: General marking principles

Possible issues when marking	
1. The answer does not closely match any of the examples in the mark scheme.	Those marking the test will use their judgement to decide whether the answer corresponds with details in the 'Requirement' column of the mark scheme. Refer also to the 'Additional guidance' column and to the examples of responses where appropriate.
2. The pupil has answered in a non-standard way.	Pupils may provide evidence in any form as long as its meaning can be understood. Diagrams, symbols or words are acceptable ways to present an answer.
3. The answer is correct, but the wrong working is shown.	Always award the mark for a final response that is correct.
4. No answer is provided in the expected place, but the correct answer is given elsewhere.	Where a word or number response is expected, a pupil may meet the requirement by annotating a graph or labelling a diagram elsewhere in the question.
5. The correct answer has been crossed (or rubbed) out and not replaced.	You should not award any marks for crossed out answers or working.
6. The answer in the answer box is wrong, but the correct answer is shown in the working.	Give precedence to the response provided in the answer box over any other workings. However, in a 2-mark question, one mark may still be awarded for evidence of a complete, correct method.

Possible issues when marking	
7. More than one answer is given.	If all provided answers are correct (or a range of answers is given, all of which are correct), a mark will be awarded unless the mark scheme states otherwise. If both correct and incorrect responses are given, no mark will be awarded unless the mark scheme states otherwise.
8. There appears to be a misread of numbers that affects the pupil's working.	<p>A misread occurs when a pupil misreads a number given in the question and consistently uses a different number that does not alter the original intention or difficulty of the question. For example, if 43 is misread as 48, both numbers may be regarded as comparable in difficulty. However, if 43 is misread as 40 or 45, the misread number may be regarded as making the question easier, depending on the question. For example, $26 + 40$ is easier than $26 + 48$. The misread of a number will affect the award of marks.</p> <p>No marks are awarded if there is more than one misread in a question or if the mathematics is simplified by the misread.</p> <p>For 1-mark questions: no mark is awarded for one or more misreads.</p> <p>For 2-mark questions that have a method mark: one mark is awarded if the correct method is correctly implemented with the misread number, provided this does not simplify the mathematics.</p>
9. The answer is numerically equivalent to the answer in the mark scheme.	Answers should be given as single values in their simplest form unless the mark scheme states otherwise, e.g. for $\square = 12 - 5$, the answer $4 + 3$ will not be accepted. Where alternative expressions are acceptable, these will be indicated in the additional guidance column.
10. The pupil reverses a digit in their answer.	<p>A reversed digit is acceptable if it is clearly recognisable as the digit intended. For example, a reversed 2 must clearly show the characteristics of a 2 rather than a 5.</p> <p>As a further example, where the answer is 61 and the response ɒ1 is given, then this should be awarded the mark.</p> <p>You should make a decision based upon your knowledge of the pupil's writing.</p>

Possible issues when marking	
11. The pupil transposes digits in their answer.	<p>A pupil transposes digits by reversing their order, for example, 83 instead of 38.</p> <p>For questions where no working is shown, an answer with transposed digits should not be awarded the mark. For example, a response of 16 or 18 when the answer is 61 should not be marked as correct.</p>
12. The pupil has worked out the answer correctly, but then copied the wrong answer into the answer box.	<p>A transcription error can occur when the pupil miscopies the correct answer from the end of their working into the answer box.</p> <p>Give precedence to the answer given in the answer box over any other workings. There may be cases where the incorrect answer is a transcription error, in which case you may check the pupil's intention and decide whether to award the mark(s).</p>
13. The answer correctly follows through from earlier incorrect work.	<p>'Follow through' marks for an answer may only be awarded when specifically stated in the mark scheme.</p>

6. Internal moderation procedures

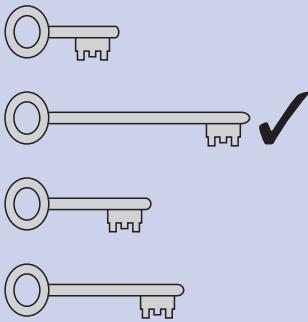
We recommend those who are involved in marking the key stage 1 tests undertake moderation activity to ensure marking is consistent across their school.




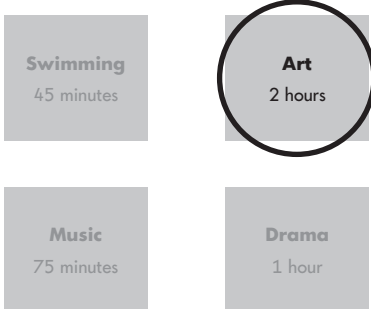
7. Mark schemes for Paper 1: arithmetic

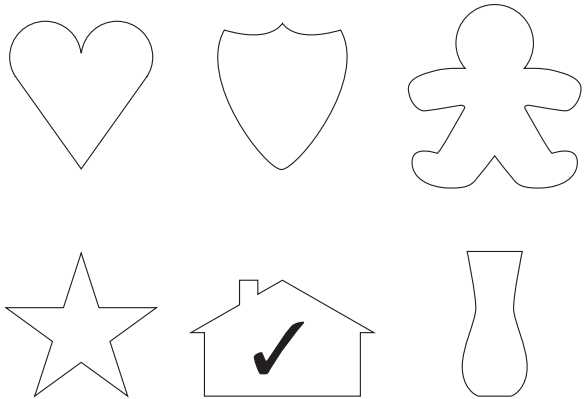
Equivalent answers are **not** acceptable, for example, $10 + 4$ instead of 14. When marking the arithmetic questions, refer specifically to general marking principles 9, 10, 11 and 12.

Qu.	Requirement	Mark	Additional guidance
P	6	none	Practice question
1	9	1m	
2	42	1m	
3	30	1m	
4	10	1m	
5	84	1m	
6	30	1m	
7	3	1m	
8	36	1m	
9	60	1m	
10	90	1m	
11	85	1m	
12	14	1m	
13	12	1m	
14	76	1m	
15	4	1m	
16	59	1m	
17	34	1m	
18	109	1m	
19	100	1m	
20	44	1m	
21	65	1m	
22	6	1m	
23	70	1m	
24	12	1m	
25	27	1m	

8. Mark schemes for Paper 2: reasoning

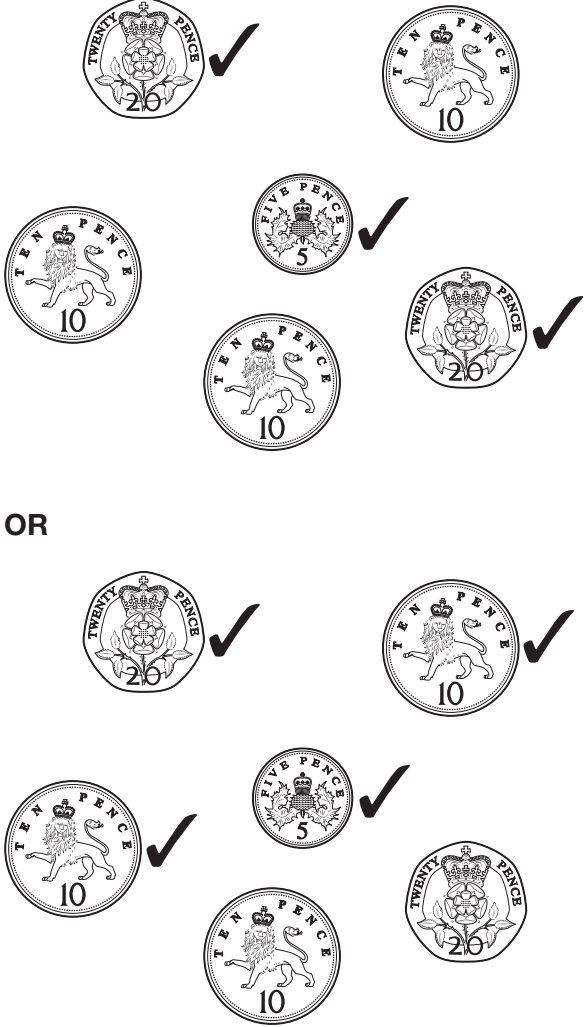
Qu.	Requirement	Mark	Additional guidance								
Aural questions											
P	<p>The correct key ticked as shown:</p> 	none	Practice question								
1	24	1m									
2	42	1m	<p>Accept any number that has 4 tens and 2 ones, e.g. 042, 142, 1042.</p> <p>Refer to general marking principles 10 and 11 on pages 7 – 8.</p>								
3	<p>The correct fraction ticked as shown:</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td>$\frac{1}{2}$</td> <td><input type="checkbox"/></td> <td>$\frac{1}{4}$</td> <td><input type="checkbox"/></td> </tr> <tr> <td>$\frac{1}{3}$</td> <td><input checked="" type="checkbox"/></td> <td>$\frac{3}{4}$</td> <td><input type="checkbox"/></td> </tr> </table>	$\frac{1}{2}$	<input type="checkbox"/>	$\frac{1}{4}$	<input type="checkbox"/>	$\frac{1}{3}$	<input checked="" type="checkbox"/>	$\frac{3}{4}$	<input type="checkbox"/>	1m	<p>Accept any other clear way of indicating the correct answer.</p> <p>Do not award the mark if additional fractions are indicated, unless it is clear the correct fraction is the pupil's final choice.</p>
$\frac{1}{2}$	<input type="checkbox"/>	$\frac{1}{4}$	<input type="checkbox"/>								
$\frac{1}{3}$	<input checked="" type="checkbox"/>	$\frac{3}{4}$	<input type="checkbox"/>								
4	7 (marbles)	1m									
5	<p>Number sentence completed correctly as shown:</p> $\boxed{5} \times \boxed{5} = 25$	1m	The number 5 must appear in both answer boxes for the award of the mark.								
Written questions											
6	<p>Letters put in the correct order as shown:</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">C</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">A</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">B</td> </tr> <tr> <td style="text-align: center;">tallest</td> <td></td> <td></td> <td style="text-align: center;">shortest</td> </tr> </table>	C	D	A	B	tallest			shortest	1m	<p>All letters must be in the correct order for the award of the mark.</p> <p>Accept any other clear way of indicating the correct answer, e.g. matching each building to its correct position.</p>
C	D	A	B								
tallest			shortest								


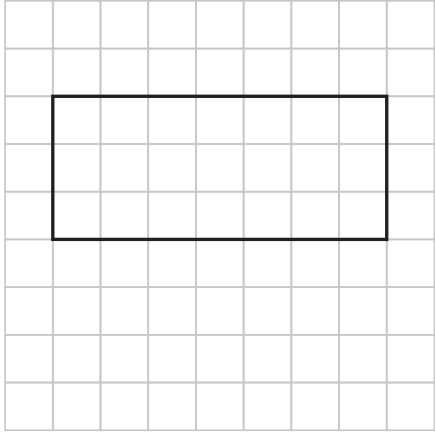
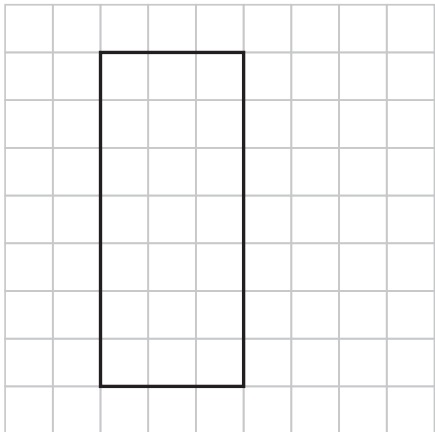
Qu.	Requirement	Mark	Additional guidance
7	<p>Both shapes ticked as shown:</p> <p>Tick two.</p> <p>triangle <input type="checkbox"/></p> <p>square <input type="checkbox"/></p> <p>rectangle <input checked="" type="checkbox"/></p> <p>circle <input checked="" type="checkbox"/></p> <p>hexagon <input type="checkbox"/></p>	1m	<p>Both correct shapes must be indicated for the award of the mark.</p> <p>Accept any other clear way of indicating the two correct shapes.</p> <p>Do not award the mark if additional shapes are indicated, unless it is clear that the two correct shapes are the pupil's final choice.</p>
8	<p>Three-quarters shaded as shown, e.g.</p> 	1m	<p>Accept any other clear way of indicating three-quarters, e.g. marking the appropriate number of sections. Accept slight inaccuracies in shading.</p> <p>Do not award the mark if more or less than three-quarters has been shaded and the intention is not clear, e.g.</p> 
9	<p>The fourth black bead ticked as shown, e.g.</p> 	1m	<p>Accept any other clear way of indicating the correct answer, e.g. circling the fourth black bead, ticking above the fourth black bead etc.</p> <p>Do not award the mark if more than one bead has been indicated, unless it is clear that the fourth black bead is the pupil's final choice.</p>
10	100 (balls)	1m	
11	<p>Longest time indicated as shown:</p> 	1m	<p>Accept any other clear way of indicating the correct answer, e.g. ticking the correct club.</p> <p>Do not award the mark if more than one club has been indicated, unless it is clear that the correct club is the pupil's final choice.</p>
12	18 (cm)	1m	

Qu.	Requirement	Mark	Additional guidance
13	34	1m	Refer to general marking principle 9 on page 7.
14	4	1m	
15	<p>Number sentence completed as shown:</p> $\boxed{5} \times \boxed{6} = \boxed{30} \text{ children}$ <p>OR</p> $\boxed{6} \times \boxed{5} = \boxed{30} \text{ children}$	1m	All three numbers must be correct for the award of the mark.
16	4 (fish)	1m	<p>The correct number of 4 must be seen for the award of the mark.</p> <p>Also accept the word 'four' written as long as it is clear it is the pupil's final answer.</p>
17	<p>Shape indicated as shown:</p> 	1m	<p>Accept any other clear way of indicating the correct answer, e.g. circling or putting a cross on the correct shape.</p> <p>Do not award the mark if more than one shape has been indicated, unless it is clear that the correct shape is the pupil's final choice.</p>
18	10 (coins)	1m	

Qu.	Requirement	Mark	Additional guidance
19	<p>Both number sentences completed as shown:</p> $\boxed{8} \times \boxed{5} = \boxed{40}$ $\boxed{40} \div \boxed{5} = \boxed{8}$ <p>OR</p> $\boxed{8} \times \boxed{5} = \boxed{40}$ $\boxed{40} \div \boxed{8} = \boxed{5}$	1m	All numbers in both number sentences must be correct for the award of the mark.
20	<p>Correct number given as shown:</p>	1m	
21	60 (planes)	1m	

Qu.	Requirement	Mark	Additional guidance
22	<p>Award TWO marks for two number sentences completed correctly, using four different number cards from those that are given, e.g.</p> $\boxed{55} + \boxed{5} = \boxed{60}$ $\boxed{15} + \boxed{45} = \boxed{60}$ $\boxed{25} + \boxed{35} = \boxed{60}$ <p>Award ONE mark for any one number sentence completed correctly using the given cards only, e.g.</p> $\boxed{25} + \boxed{35} = \boxed{60}$ $\boxed{10} + \boxed{50} = \boxed{60}$ <p>OR</p> <p>Award ONE mark if one number sentence is correct, but the pupil has used the same numbers cards for the other number sentence, e.g.</p> $\boxed{55} + \boxed{5} = \boxed{60}$ $\boxed{5} + \boxed{55} = \boxed{60}$	2m	<p>Accept any other clear way of indicating the correct answers, e.g. matching correct cards to answer boxes.</p> <p>Do not award any marks if the pupil uses numbers that are not given in the question, e.g.</p> $\boxed{59} + \boxed{1} = \boxed{60}$ $\boxed{50} + \boxed{10} = \boxed{60}$
		1m	

Qu.	Requirement	Mark	Additional guidance
23	<p>Award the mark for any combination of coins indicated that totals 45p, e.g.</p>  <p>OR</p>	1m	<p>Accept any other clear way of indicating a correct combination of coins, i.e.</p> <p>20p, 20p and 5p</p> <p>or</p> <p>20p, 10p, 10p and 5p</p>
24	<p>Award TWO marks for the correct answer of 85 (p).</p> <p>If the answer is incorrect or missing, award ONE mark for evidence of a complete, correct method, e.g.</p> <ul style="list-style-type: none"> • $20 + 20 + 20 + 25 =$ (incorrect or no answer) • $20 \times 3 = 40$ (error) $40 + 25 =$ 	2m 1m	<p>Use the example responses given on pages 18 – 19 to help determine how many marks can be awarded.</p>
25	15 (p)	1m	
26	55	1m	
27	15 (°C)	1m	

Qu.	Requirement	Mark	Additional guidance
28	13 written in both boxes as shown: 	1m	The correct number must be written in both boxes for the award of the mark.
29	Rectangle drawn with the correct dimensions 7cm × 3cm, e.g.  OR 3cm × 7cm 	1m	Accept any orientation of the rectangle, with the correct dimensions. Accept slight inaccuracies of drawing the rectangle as long as the intention is clear; allowing a tolerance of up to 5mm. Use the example responses given on pages 20 – 21 to help determine how the mark can be awarded.
30	Award TWO marks for the correct answer of 45 If the answer is incorrect or missing, award ONE mark for evidence of a complete, correct method, e.g. <ul style="list-style-type: none"> • $7 \times 10 - 25 =$ (incorrect or no answer) • $7 \times 10 = 60$ (error) • $60 - 25 =$ 	2m 1m	Use the example responses given on pages 22 – 23 to determine how many marks can be awarded.

Qu.	Requirement	Mark	Additional guidance
31	Number sentence completed as shown: $13 + 6 = 10 +$ 9	1m	Refer to general marking principle 9 on page 7.
32	Award the mark for any two numbers that are greater than 20 with a difference of 2, e.g. <ul style="list-style-type: none"> • 24 – 22 • 30 – 28 • 49 – 47 	1m	Both numbers must be greater than 20 for the award of the mark. Do not award the mark if only one number is greater than 20 and has a difference of 2, e.g. <ul style="list-style-type: none"> • 22 – 20 Do not award the mark if the numbers are presented in the wrong order, e.g. <ul style="list-style-type: none"> • 22 – 24 = 2

9. Example responses

9.1 Examples of responses from question 24

Dale: 2 marks

Show your working

$$20+20+20=60$$

$$60+25=85$$

58 _P

2

Karolina: 1 mark

Show your working

3 lots of 20 = 60

$$60+25$$

58 _P

1

Dale and Karolina have recorded the same answer in the answer box. In his working, Dale has shown a complete, correct method with the correct answer. However, in transcribing his answer into the answer box, he has transposed the digits, recording 58 instead of 85. It is clear that his intention was to write 85, but he has miscopied his final answer. In this case we can apply general marking principle 12 (see page 8). Therefore, Dale can be awarded the full **two marks**. In contrast, Karolina has not recorded the correct answer, 85, anywhere. However, she has written a complete, correct method and is awarded **one mark**.

Freya: 1 mark

Show your working

$$60+25=75$$

75 _P

1

Harmeet: 0 marks

Show your working

$$\begin{array}{r} 20 \\ 40 \\ 60 \end{array}$$

84 _P

0

Freya and Harmeet have an incorrect final answer, but both have provided methods. In her method, Freya has not shown how she has reached 60, but she has shown that 25 has to be added to this amount. Although, she has given an incorrect final answer, she can be awarded **one mark** for a complete, correct method. In contrast, Harmeet has shown how he reached 60 by counting in twenties. However, he has not shown the final step in his working. He has recorded 84 as his final answer, but we do not know that he was attempting to add 25, so his method cannot be considered correct. Therefore, he is awarded **no marks**.

9.1 Examples of responses from question 24 (continued)

Jake: 1 mark

Show your working

$$20 + 20 + 20 = 30$$

$$30 + 25 = 55$$

55 p

1

Esmae: 0 marks

Show your working

$$20p + 25p = 45$$

$$20 + 20 = 40$$

$$40 + 5 = 45$$

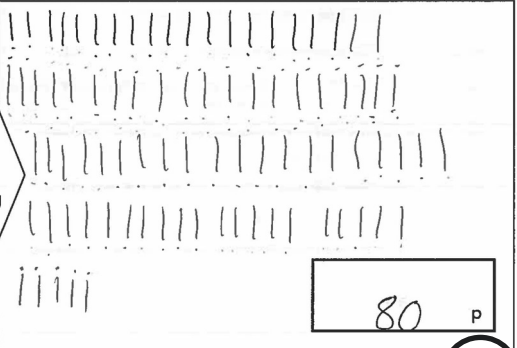
45p

0

Both Jake and Esmae have incorrect final answers and they have provided methods with errors. Jake has made an arithmetic error in his first step of adding twenties. He then correctly added 25 to his first total of 30. Although his final answer is incorrect, he can be awarded **one mark** for his complete, correct method. Esmae, in comparison, has correctly added the cost of one biscuit and one cake, and then separately added the cost of two biscuits. In her last step, she has not added the two totals correctly, only adding 5 instead of 45 to 40, so her method is not correct. Therefore, she is awarded **no marks**.

Jabeen: 1 mark

Show your working

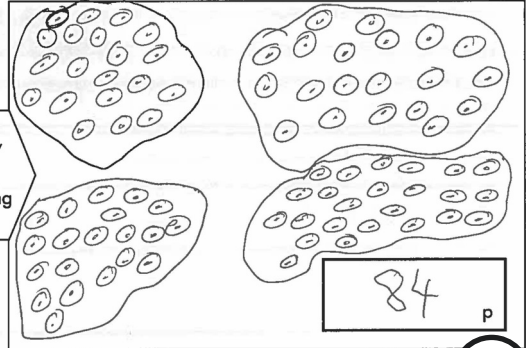


80 p

1

Kirk: 0 marks

Show your working



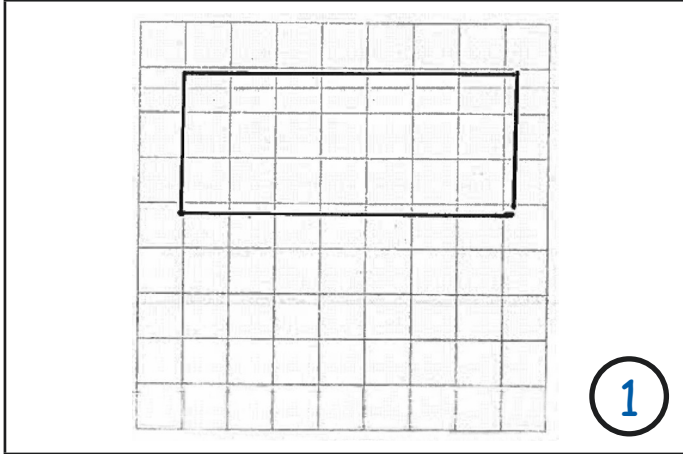
84 p

0

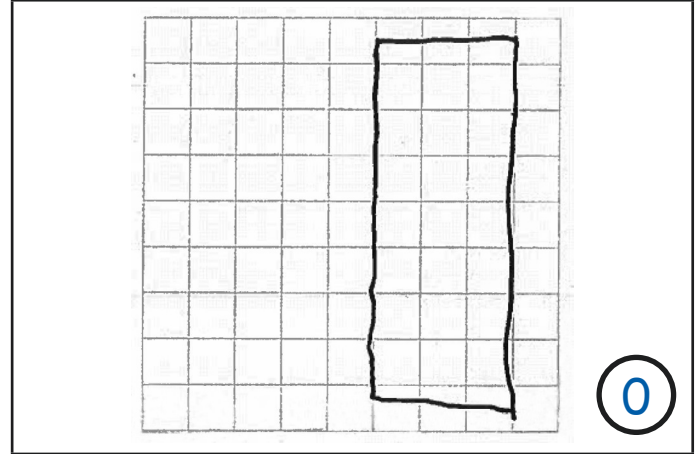
Both Jabeen and Kirk have used a pictorial method to obtain an answer. Jabeen has correctly drawn 85 tallies, but has made a counting error when finding the total number. Her pictorial method is complete and correct so she is awarded **one mark**. Kirk has correctly recorded three groups of 20 pence, but in his fourth group, he has only recorded 24 pence instead of 25 pence. As a consequence, he reached the answer 84 instead of 85. Although he has counted correctly, his method is not correct and he is awarded **no marks**.

9.2 Examples of responses from question 29

Ashley: 1 mark

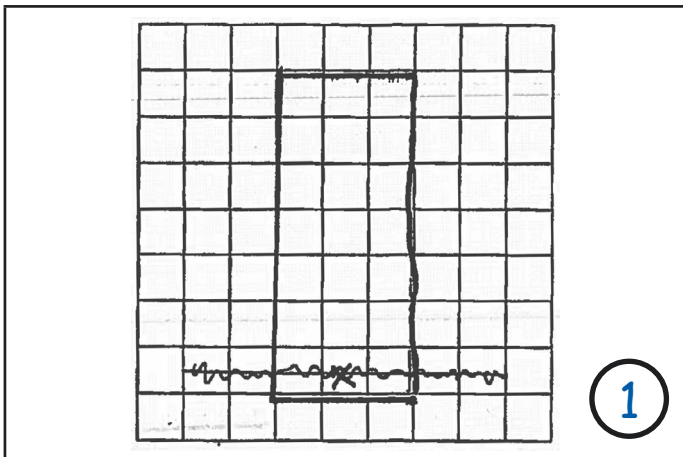


Georgia: 0 marks

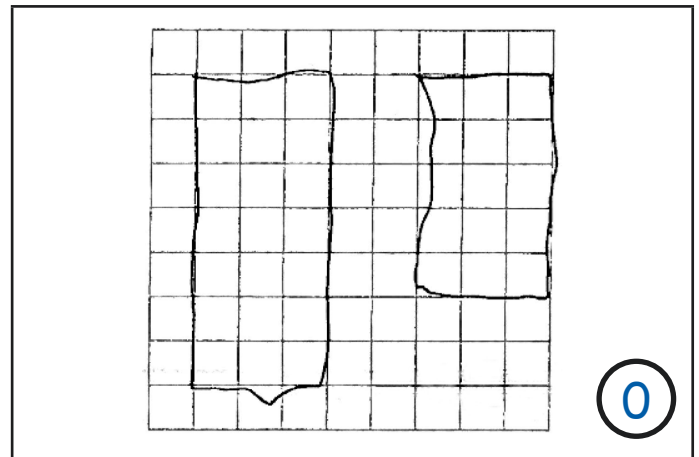


Ashley has drawn a rectangle that is slightly inaccurate ($7.2\text{cm} \times 3.1\text{cm}$), but within the tolerance allowed (5mm), so he is awarded **one mark**. In contrast, Georgia has drawn a rectangle that is outside of the tolerance allowed, and is awarded **no marks**.

Cristina: 1 mark



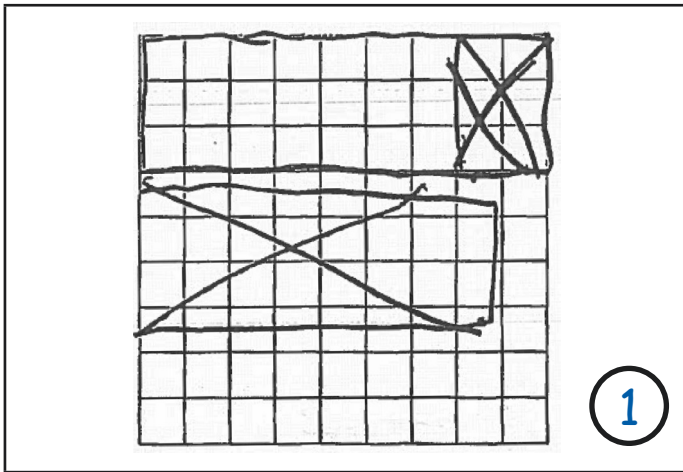
Alfie: 0 marks



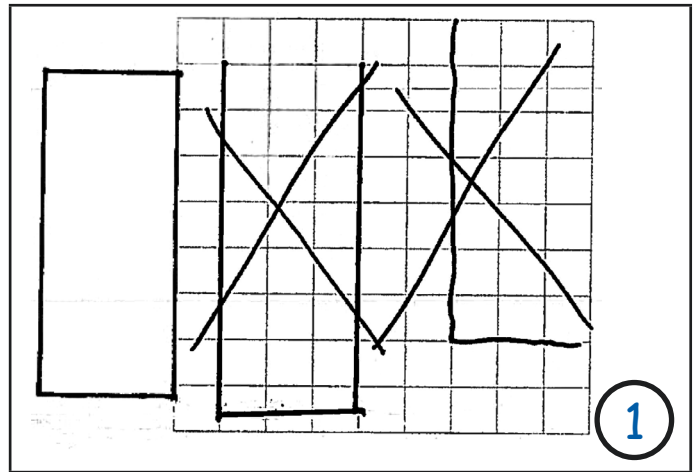
Cristina has superimposed a rectangle that has the correct dimensions over the first line she drew. Her intended answer is clear and she is awarded **one mark**. Alfie has drawn two rectangles and one of them is correct with slight inaccuracies. However, he has not indicated which rectangle is his intended answer. As a result, general marking principle 7 (page 7) is applied and **no marks** can be awarded.

9.2 Examples of responses from question 29 (continued)

Louise: 1 mark



Matteo: 1 mark



Both Louise and Matteo have made corrections in their creditworthy responses. Louise has corrected her response by crossing out. Therefore, she is awarded **one mark**. Similarly, Matteo has corrected his answer, but he has not used the grid for his intended answer. However, he has drawn a rectangle that is creditworthy and therefore is awarded **one mark**.

9.3 Examples of responses from question 30

Hanaa: 2 marks

Show your working

$$70 - 20 = 50$$

$$50 - 5 = 45$$

45 grapes

2

Kyle: 1 mark

Show your working

$$70 - 25 = 55$$

$$\begin{array}{r} 70 \\ - 25 \\ \hline 70 \end{array} \quad \begin{array}{r} 25 \\ - 20 \\ \hline 5 \end{array}$$

55 grapes

1

In their methods, Hanaa and Kyle both calculated 7×10 mentally and then attempted a partitioning method to subtract 25 from 70. Hanaa subtracted 20 correctly and then subtracted 5 from her answer. She recorded the correct answer in the answer box and is awarded **two marks**. Kyle also partitioned 25 into 20 and 5, and calculated the difference in the tens. However, he did not subtract the 5 and, as a result, he provided an incorrect answer. Although his final answer is incorrect, Kyle is awarded **one mark** for his complete, correct method.

Caleb: 1 mark

Show your working

$$7 \times 10 = 70 - 25 = \del{45} 55$$

55 grapes

1

Aidan: 0 marks

Show your working

$$10 \times 7 = 70$$

70 grapes

0

Both Caleb and Aidan have crossed out their work. Caleb recorded a complete, correct method with the correct answer 45 in his working. He then crossed out the 45 and recorded 55 as his final answer. We cannot consider working or answers that have been crossed out. Consequently, Caleb is awarded **one mark** for a complete, correct method only. In comparison, Aidan has only recorded and correctly evaluated one step of the problem. He has not completed the method and has provided the final answer of 70. His final answer is incorrect and he is awarded **no marks**.

9.3 Examples of responses from question 30 (continued)

Izabella: 1 mark

Handwritten response by Izabella. It shows 7 bags of grapes. The first two bags have 10 grapes each, and the remaining five bags have 5 grapes each. A total of 25 grapes are crossed out with 'X' marks. A box at the bottom right contains the answer '43 grapes'. A circled '1' is next to the box.

Siobhan: 0 marks

Handwritten response by Siobhan. It shows 69 grapes arranged in rows. The first two rows have 10 grapes each, and the remaining five rows have 9 grapes each. A total of 25 grapes are crossed out with 'X' marks. A box at the bottom right contains the answer '44 grapes'. A circled '0' is next to the box.

Izabella and Siobhan have both provided an incorrect answer, but have used pictorial methods. Izabella has drawn 7 bags of 10 grapes and has clearly crossed off 25 of these grapes. In her final answer, she has made a counting error, so she is awarded **one mark** for a complete, correct method. In contrast, Siobhan has drawn 69 grapes instead of 70 and although she has correctly crossed off 25 of these, her method is not correct because she did not start with 70. Therefore, she is awarded **no marks**.

Owen: 1 mark

Handwritten response by Owen. It shows the calculation $10 \times 7 = 60$ (with a correction from 70 to 60) and $60 - 20 - 5 = 40$. An arrow points from the result 40 to a box containing '40 grapes'. A circled '1' is next to the box.

Grace: 0 marks

Handwritten response by Grace. It shows a number line starting at 10 and increasing by 10 up to 80. Below the number line is the calculation $80 - 25 = 55$. A box at the bottom right contains the answer '55 grapes'. A circled '0' is next to the box.

Owen and Grace have both provided an incorrect final answer, but have included their methods. In Owen's method, he has made two arithmetic errors, but his method is complete and correct; therefore he is awarded **one mark**. Grace has used a number line to calculate, 7×10 . However, because she started to count from ten, she has erroneously reached the answer of 80. She then successfully subtracts 25 from her answer of 80. As a result of her first step being incorrect, she cannot be awarded any marks for her method.



2018 key stage 1 mathematics test mark schemes

Paper 1: arithmetic and Paper 2: reasoning

Electronic PDF version product code: STA/18/7966/e ISBN: 978-1-78644-639-8

For more copies

Additional printed copies of this booklet are not available. It can be downloaded from www.gov.uk/government/publications.

© Crown copyright 2018

Re-use of Crown copyright in test materials

Subject to the exceptions listed below, the test materials on this website are Crown copyright and you may re-use them (not including logos) free of charge in any format or medium in accordance with the terms of the Open Government Licence v3.0 which can be found on the National Archives website and accessed via the following link: www.nationalarchives.gov.uk/doc/open-government-licence. When you use this information under the Open Government Licence v3.0, you should include the following attribution: 'Contains material developed by the Standards and Testing Agency for 2018 national curriculum assessments and licensed under Open Government Licence v3.0' and where possible provide a link to the licence.



Exceptions – third-party copyright content in test materials

You must obtain permission from the relevant copyright owners, as listed in the '2018 key stage 1 tests copyright report', for re-use of any third-party copyright content which we have identified in the test materials, as listed below. Alternatively, you should remove the unlicensed third-party copyright content and/or replace it with appropriately licensed material.

Third-party content

These materials contain no third-party copyright content.

If you have any queries regarding these test materials, contact the national curriculum assessments helpline on 0300 303 3013 or email assessments@education.gov.uk.