



THIRD SPACE  
LEARNING

# Key Stage 2 SATs Paper 1: Arithmetic Pack 2

Mathematics Practice Test and  
Mark Scheme

Year 6

Name: .....

Class: .....

School: .....

Score: .....

## Instructions

You **may not** use a calculator to answer any questions in this test.

### Questions and answers

- Work as quickly and as carefully as you can.
- Put your answer in the box for each question.

- All answers should be given as a single value.
- For questions expressed as common fractions or mixed numbers, you should give your answers as common fractions or mixed numbers.
- If you cannot do a question, **go on to the next one**. You can come back to it later, if you have time.
- If you finish before the end, **go back and check your work**.

### Marks

- The number under each box at the side of the page tells you the maximum number of marks for each question.
- In this test, long division and long multiplication questions are worth **TWO** marks each. You will be awarded **TWO** marks for a correct answer. You may get **ONE** mark for showing a formal method.
- All other questions are worth **ONE** mark each.
- If you finish before the end, **go back and check your work**.

## Questions

1

$44 \times 2 =$

A large grid for working out the answer to question 1. The grid is 20 squares wide and 15 squares high. A horizontal line is drawn across the grid, 5 squares from the top. A rounded rectangular box is drawn in the bottom right corner of the grid, spanning 5 squares in width and 3 squares in height.

1 mark

2

$3,735 + 100 =$

A large grid for working out the answer to question 2. The grid is 20 squares wide and 15 squares high. A horizontal line is drawn across the grid, 5 squares from the top. A rounded rectangular box is drawn in the bottom right corner of the grid, spanning 5 squares in width and 3 squares in height.

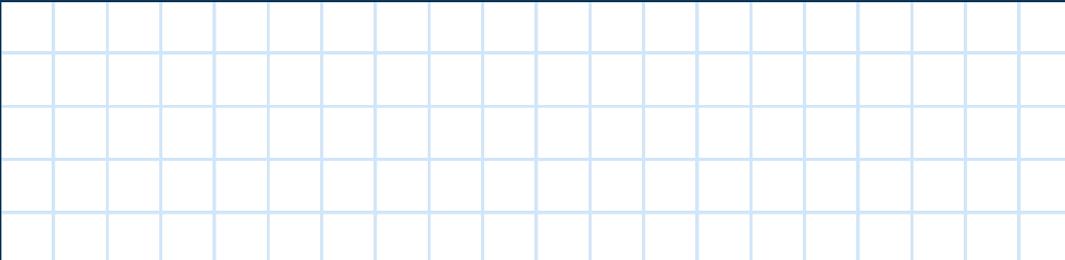
1 mark

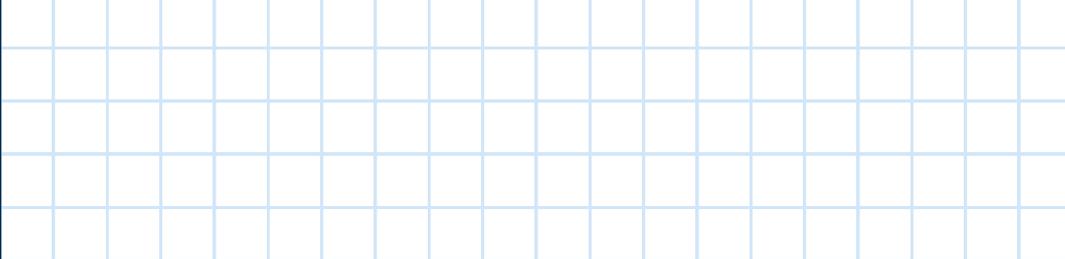
3

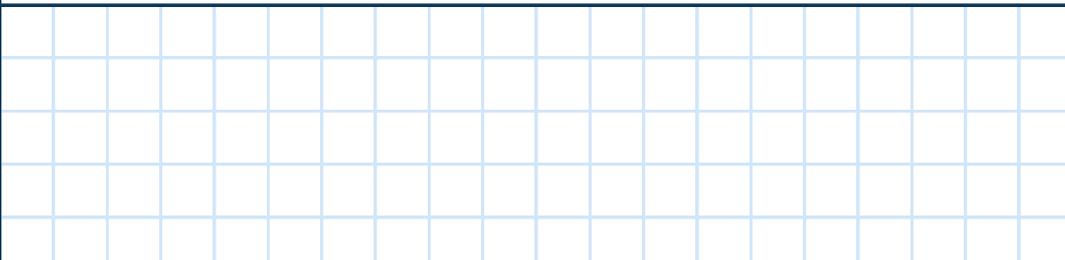
$459 \times 0 =$

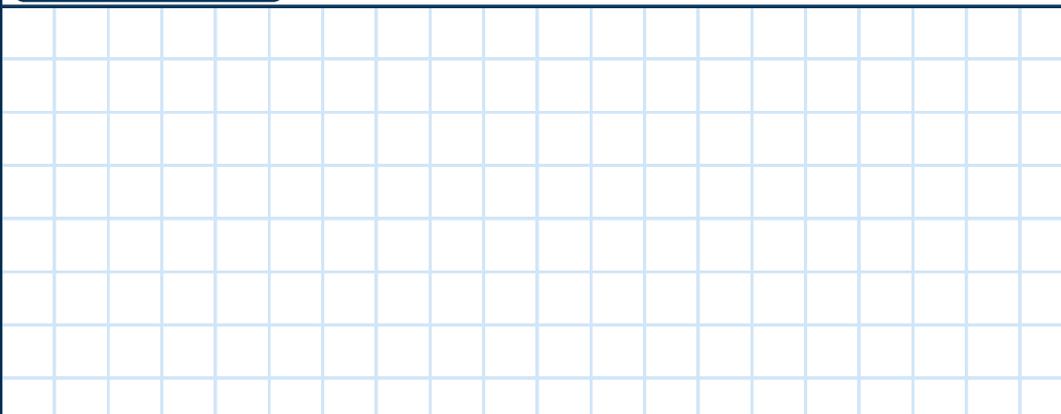
A large grid for working out the answer to question 3. The grid is 20 squares wide and 15 squares high. A horizontal line is drawn across the grid, 5 squares from the top. A rounded rectangular box is drawn in the bottom right corner of the grid, spanning 5 squares in width and 3 squares in height.

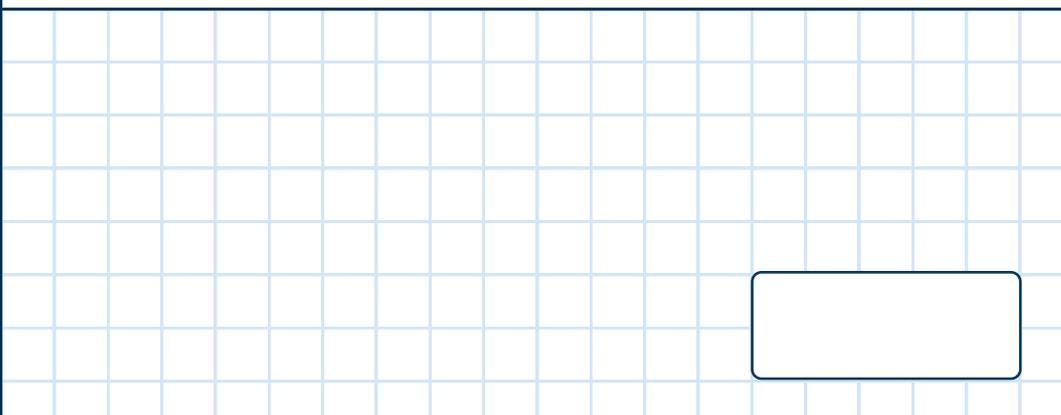
1 mark

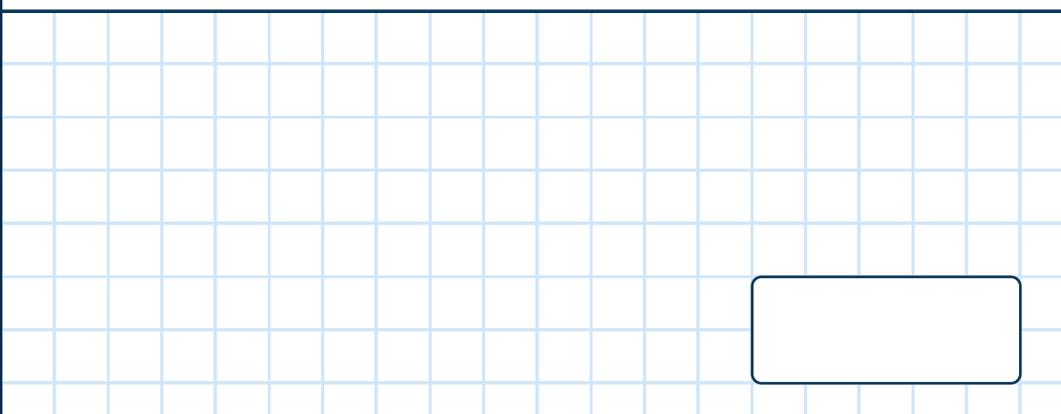
4	$742 - 8 =$	<input type="text"/>
		1 mark

5	<input type="text"/> = $56 \div 7$	<input type="text"/>
		1 mark

6	$69,997 + 5,601 =$	<input type="text"/>
		1 mark

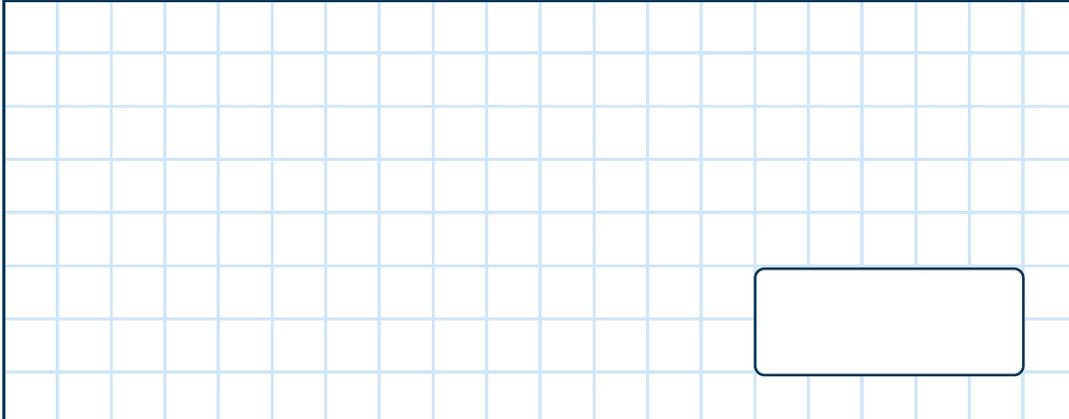
7	<input type="text"/> = 6,853 - 684	<input type="text"/> 1 mark
		

8	$5 \times 7 \times 4 =$	<input type="text"/> 1 mark
		

9	$8.4 + 0.3 =$	<input type="text"/> 1 mark
		

10

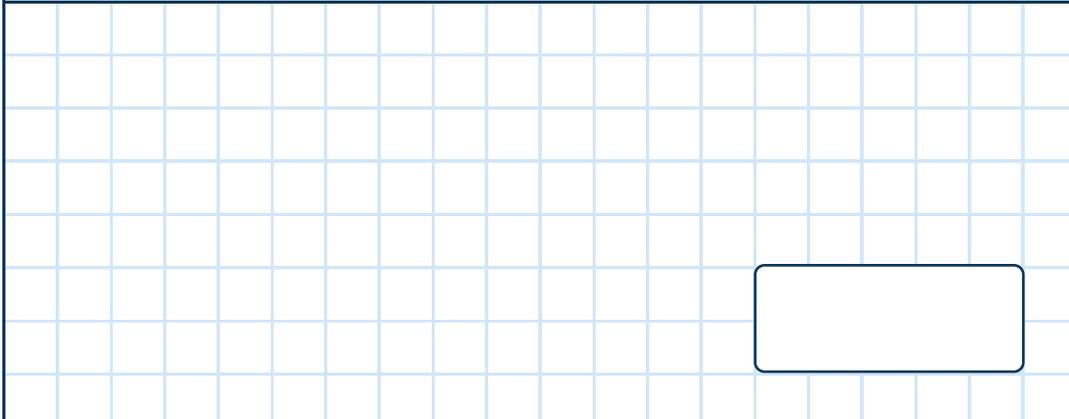
$726 \div 6 =$



1 mark

11

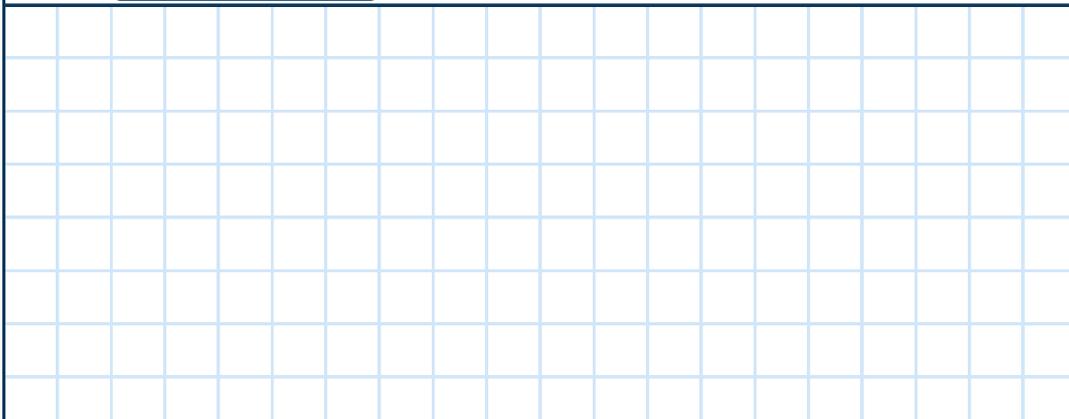
$3 - 12 =$



1 mark

12

$91 = \text{[ ]} \times 7$



1 mark

13

$$263 \div 100 =$$

1 mark

14

$$26.8 + 1.002 =$$

1 mark

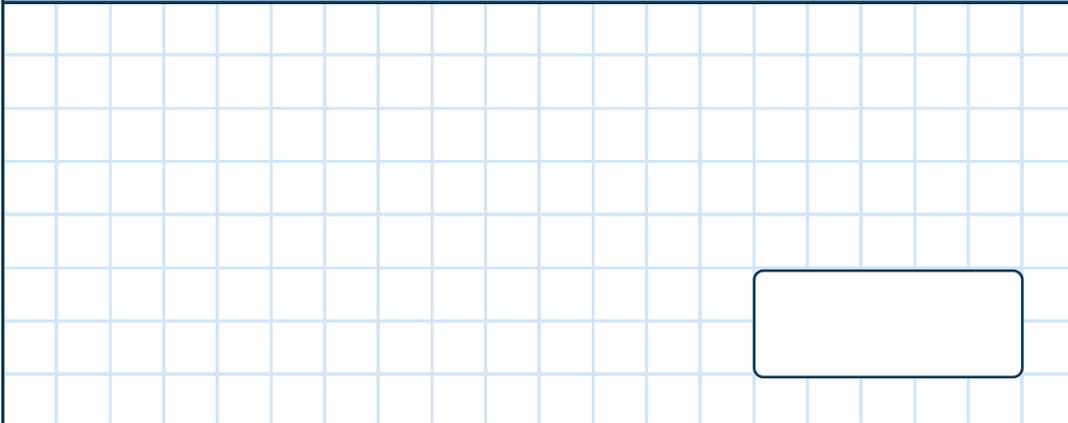
15

$$40 \times 300 =$$

1 mark

16

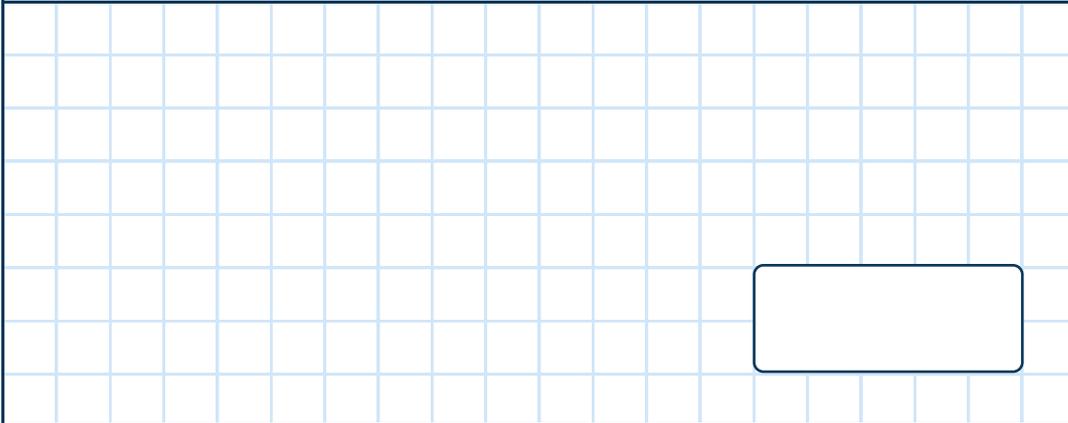
$$2,407,562 - 10,000 =$$



1 mark

17

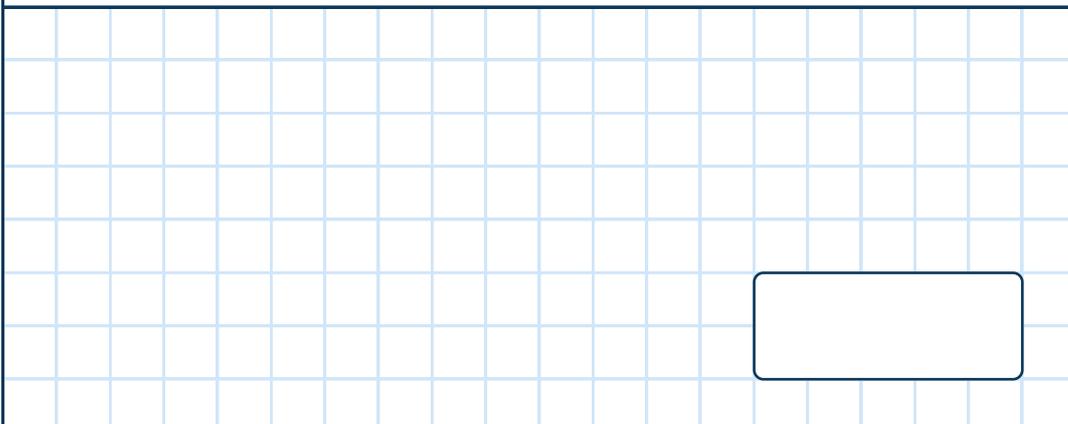
$$\frac{3}{7} + \frac{2}{7} =$$



1 mark

18

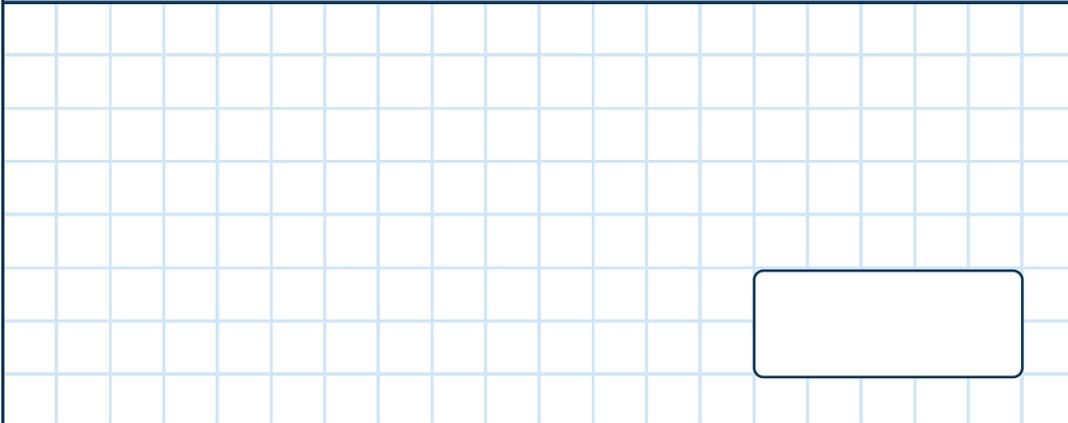
$$1,000 \times 30.7 =$$



1 mark

19

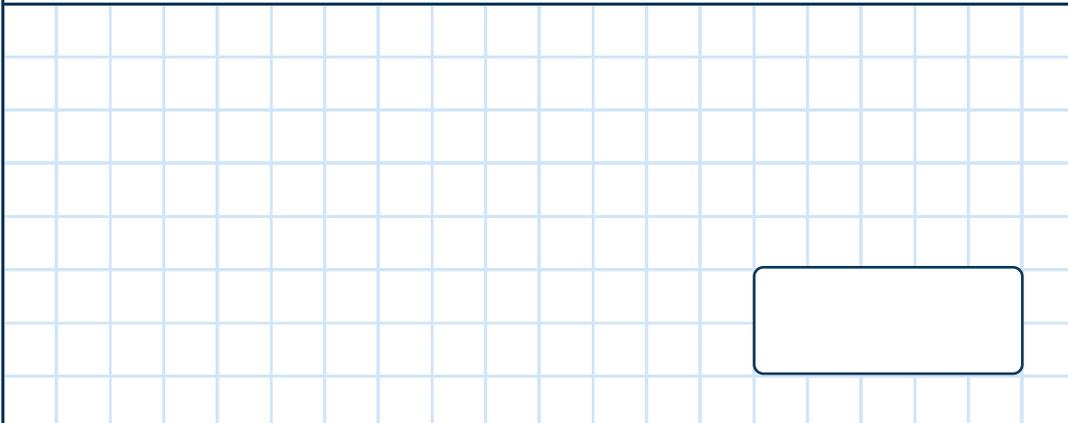
$$7,700 \div 11 =$$



1 mark

20

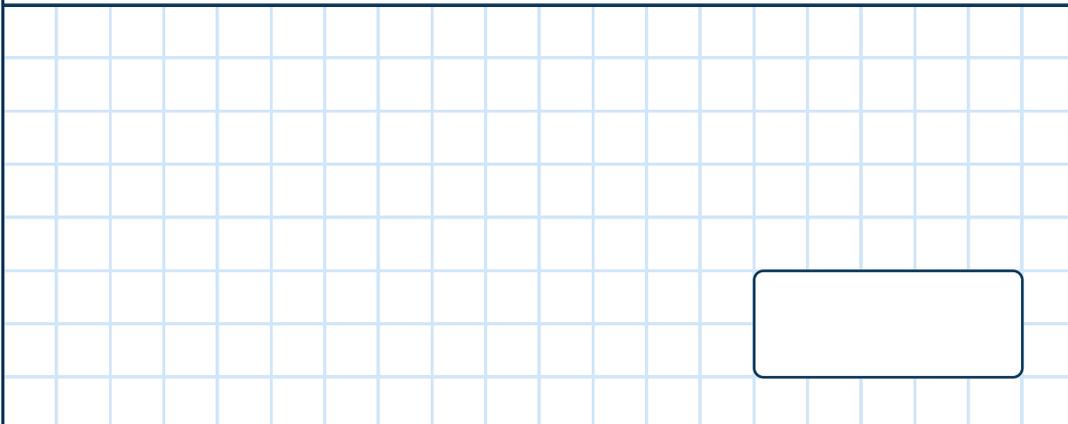
$$24.325 - 9.63 =$$



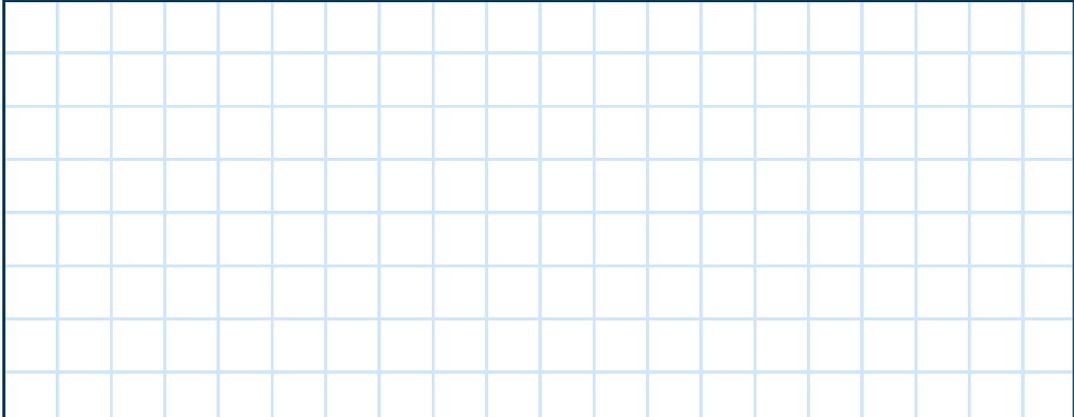
1 mark

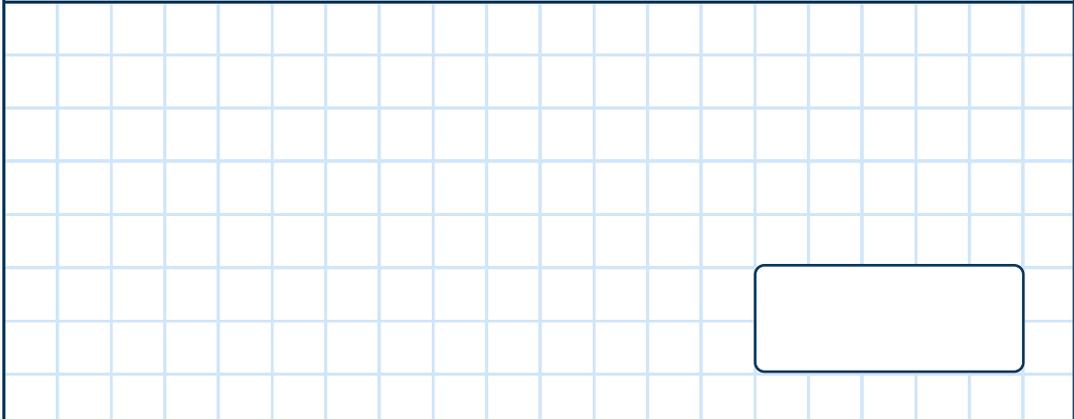
21

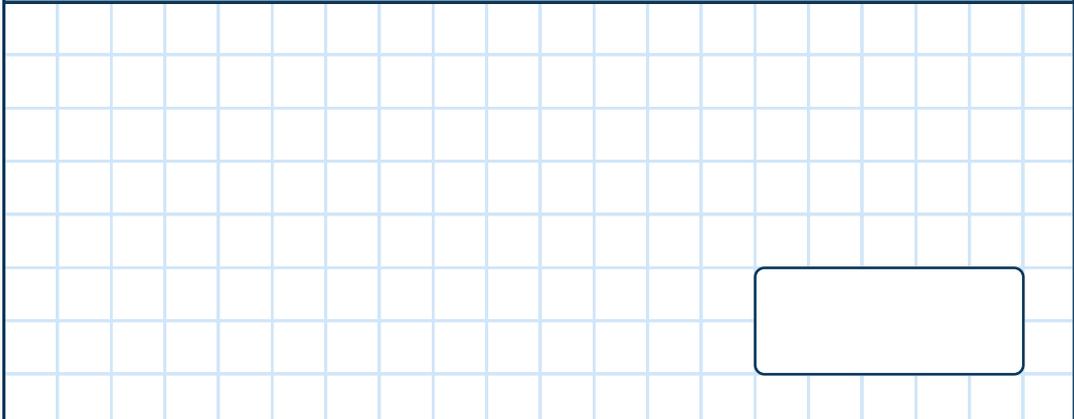
$$10,000,000 - 101 =$$



1 mark

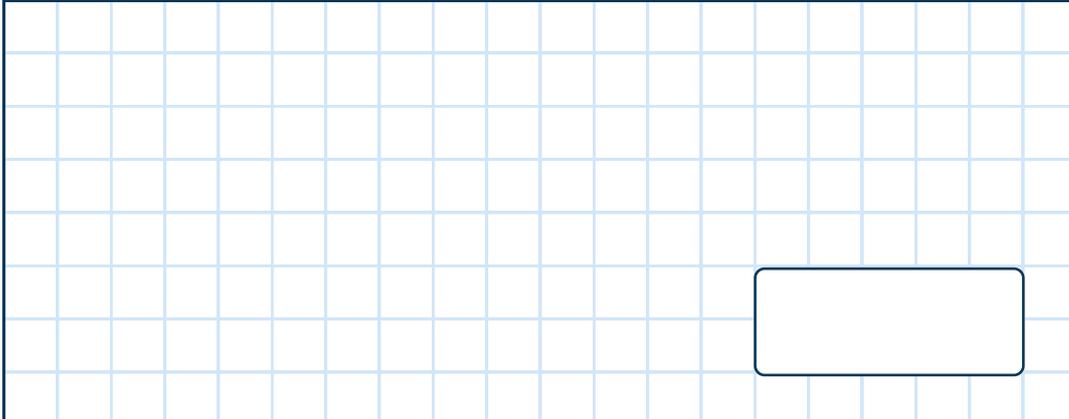
22	$\frac{1}{6} + \boxed{\phantom{000}} = \frac{5}{12}$	
		<input data-bbox="1337 562 1414 636" type="checkbox"/> 1 mark

23	$8^2 + 17 =$	
		<input data-bbox="1337 1155 1414 1229" type="checkbox"/> 1 mark

24	$1\frac{4}{9} \times 3 =$	
		<input data-bbox="1337 1751 1414 1825" type="checkbox"/> 1 mark

25

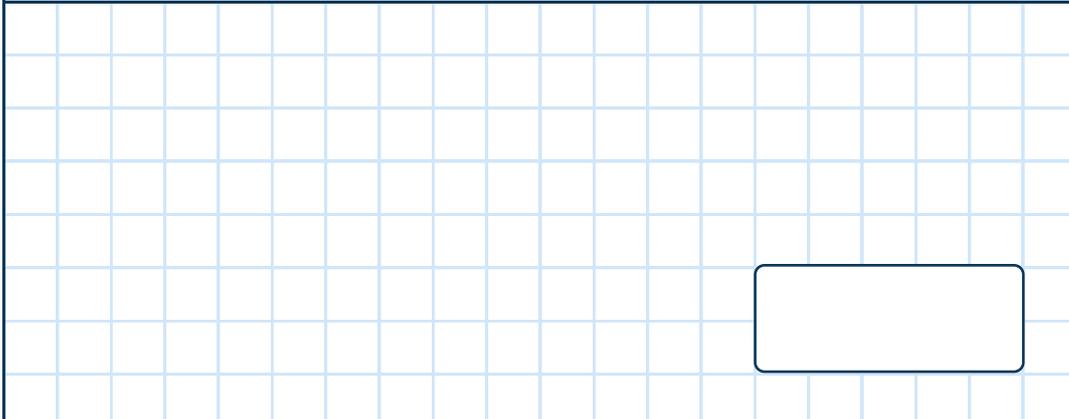
$$\frac{5}{6} \text{ of } 240 =$$



1 mark

26

$$2.56 \times 7 =$$

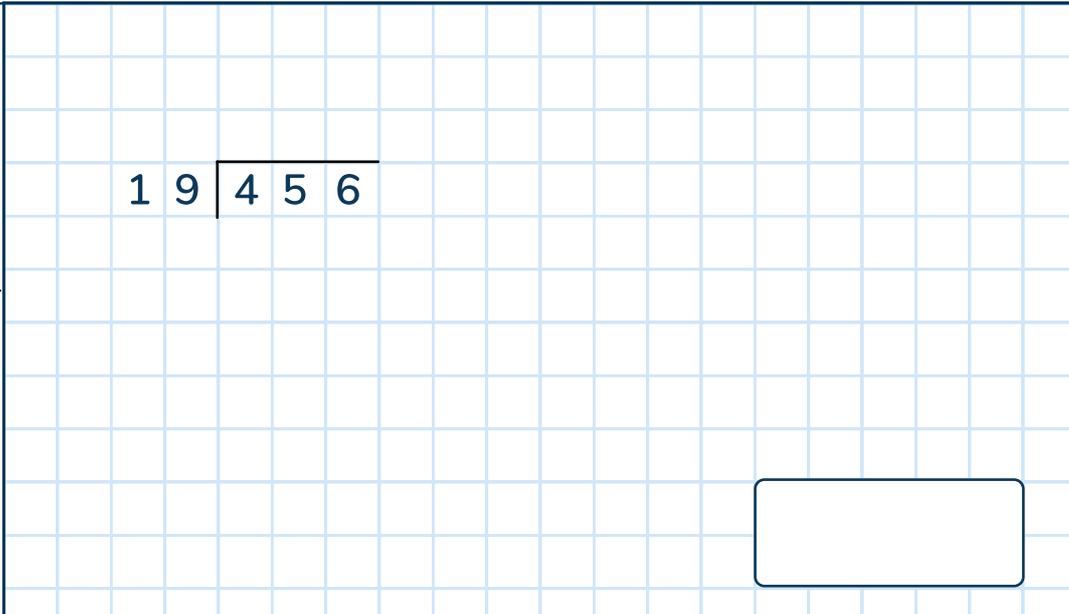


1 mark

27

$$19 \overline{) 456}$$

Show your method



2 marks

<b>28</b>	$30\% \text{ of } 3,200 =$	
	<div style="border: 1px solid black; width: 150px; height: 30px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> 1 mark

<b>29</b>	$\begin{array}{r} 46 \\ \times 23 \\ \hline \end{array}$	
Show your method	<div style="border: 1px solid black; width: 150px; height: 30px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> 2 marks

<b>30</b>	$\frac{3}{4} \div 3 =$	
	<div style="border: 1px solid black; width: 150px; height: 30px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> 1 mark

31  $7 + 3 \times 5 =$

1 mark

32

2 7 | 1 4 3 1

Show your method

2 marks

33  $\frac{4}{7} \times \frac{5}{8} =$

1 mark

34

$$\begin{array}{r} 5208 \\ \times \quad 76 \\ \hline \end{array}$$

Show your method

1 mark

35

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

2 marks

36

$$\frac{6}{7} \div 4 =$$

2 marks

## Mark Scheme

The instructions and principles of this mark scheme closely follow the guidance in the 2016 national curriculum tests. We have deliberately not set a limited time for the test paper as a teacher may want to vary it according to the standard individual children are working at.

The national curriculum test allows 30 minutes to complete this test.

## Answers

Question Number	Requirement	Mark	Additional guidance	Content Domain Ref	NC strand
1	88	1m		5C6a	Calculations
2	3,835	1m		3N2b	Number
3	0	1m		4C6b	Calculations
4	734	1m		3C1	Calculations
5	8	1m		3C7	Calculations
6	75,598	1m		5C2	Calculations
7	6,169	1m		4C2	Calculations
8	140	1m		4C6b	Calculations
9	8.7	1m		5f10	Fractions
10	121	1m		5C7b	Calculations

## Key Stage 2 SATs Mathematics Practice test | Paper 1: Arithmetic | Answers

Question Number	Requirement	Mark	Additional guidance	Content Domain Ref	NC strand
11	-9	1m		6N6	Number
12	13	1m	<b>Do not</b> accept 9	3C7	Calculations
13	2.63	1m		5C6b	Calculations
14	27.802	1m		5F10	Fractions
15	12,000	1m		5C6a	Calculations
16	2,397,562	1m		5C2	Calculations
17	$\frac{5}{7}$	1m	<b>Accept</b> equivalence	4F4	Fractions
18	30,700	1m		6F9a	Fractions
19	700	1m		5C6a	Calculations
20	14.695	1m		5F10	Fractions
21	9,999,899	1m		5C2	Calculations
22	$\frac{3}{12}$ or $\frac{1}{4}$	1m	<b>Accept</b> equivalence	5F4	Fractions

Key Stage 2 SATs Mathematics Practice test | Paper 1: Arithmetic | Answers

Question Number	Requirement	Mark	Additional guidance	Content Domain Ref	NC strand
23	81	1m		6C9	Calculations
24	$3\frac{12}{9}$ or $4\frac{1}{3}$	1m	<b>Accept</b> equivalence	5F5	Fractions
25	200	1m		4F10a	Fractions
26	17.92	1m		6F9b	Fractions
27	<p>Award <b>TWO</b> marks for the correct answer of 24                      If the answer is incorrect, award <b>ONE</b> mark for the formal methods of division with no more than <b>ONE</b> arithmetical error, i.e.</p> <ul style="list-style-type: none"> <li>• long division algorithm, e.g.</li> </ul> $\begin{array}{r} 24r2 \\ 19 \overline{)456} \\ \underline{-380} \quad (20 \times 19) \\ 76 \\ \underline{-74} \quad (\text{error}) (4 \times 19) \\ 2 \end{array} \quad \text{OR} \quad \begin{array}{r} 24r10 \\ 19 \overline{)456} \\ \underline{-38} \quad (2 \times 19) \\ 86 \quad (\text{error}) \\ \underline{-76} \quad (4 \times 19) \\ 10 \end{array}$ <ul style="list-style-type: none"> <li>• short division algorithm, e.g.</li> </ul> $\begin{array}{r} 23r18 \\ 19 \overline{)4576} \end{array}$	1m	<p>Working must be carried through to reach a final answer for the award of <b>ONE</b> mark.</p> <p>Short division methods must be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure must be less than the divisor.</p>	6C7b	Fractions

Key Stage 2 SATs Mathematics Practice test | Paper 1: Arithmetic | Answers

Question Number	Requirement	Mark	Additional guidance	Content Domain Ref	NC strand
28	960	1m		6R2	Ratio
29	<p>Award <b>TWO</b> marks for the correct answer of 1 058</p> <p>If the answer is incorrect, award <b>ONE</b> mark for the formal method of long multiplication with no more than <b>ONE</b> arithmetical error, e.g.</p> $\begin{array}{r} 46 \\ \times 23 \\ \hline 138 \\ + 920 \\ \hline 1048 \text{ (error)} \end{array}$ <p style="margin-left: 100px;">OR</p> $\begin{array}{r} 46 \\ \times 23 \\ \hline 138 \\ + 920 \\ \hline 1048 \text{ (error)} \end{array}$	Up to 2m	<p>Working must be carried through to reach a final answer for the award of ONE mark.</p> <p>Do not award any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens:</p> $\begin{array}{r} 46 \\ \times 23 \\ \hline 138 \\ + 92 \\ \hline 230 \end{array}$ <p style="margin-left: 100px;"><i>(place value error)</i></p>	5C7a	Calculations
30	$\frac{1}{4}$	1m	<b>Accept</b> equivalence	6F5b	Fractions
31	22	1m		6C9	Calculations

Key Stage 2 SATs Mathematics Practice test | Paper 1: Arithmetic | Answers

Question Number	Requirement	Mark	Additional guidance	Content Domain Ref	NC strand
32	<p>Award <b>TWO</b> marks for the correct answer of 53 If the answer is incorrect, award <b>ONE</b> mark for the formal methods of division with no more than <b>ONE</b> arithmetical error, i.e.</p> <ul style="list-style-type: none"> <li>• long division algorithm, e.g.</li> </ul> $\begin{array}{r} 54 \text{ r } 13 \\ 27 \overline{) 1431} \\ \underline{-1350} \quad (50 \times 27) \\ 0121 \quad (\text{error}) \\ \underline{-108} \quad (4 \times 27) \\ 13 \end{array} \quad \text{OR} \quad \begin{array}{r} 54 \text{ r } 3 \\ 27 \overline{) 1431} \\ \underline{-135} \quad (50 \times 27) \\ 0081 \\ \underline{-78} \quad (3 \times 27) \\ 3 \end{array}$ <ul style="list-style-type: none"> <li>• short division algorithm, e.g.</li> </ul> $\begin{array}{r} 53 \text{ r } 10 \\ 27 \overline{) 14391} \quad (\text{error}) \end{array}$	Up to 2m	<p>Working must be carried through to reach a final answer for the award of <b>ONE</b> mark.</p> <p>Short division methods must be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure must be less than the divisor.</p>	6C7b	Calculations
33	$\frac{5}{14}$	Up to 2m	Accept $\frac{20}{50}$ or equivalent fraction	6F5a	Fractions

Key Stage 2 SATs Mathematics Practice test | Paper 1: Arithmetic | Answers

Question Number	Requirement	Mark	Additional guidance	Content Domain Ref	NC strand
34	<p>Award <b>TWO</b> marks for the correct answer of 395 808</p> <p>If the answer is incorrect, award <b>ONE</b> mark for the formal method of long multiplication with no more than <b>ONE</b> arithmetical error, e.g.</p> $\begin{array}{r} 5208 \\ \times 76 \\ \hline 31248 \\ 364560 \\ \hline 395708 \end{array}$ <p>OR</p> $\begin{array}{r} 5208 \\ \times 76 \\ \hline 31208 \text{ (error)} \\ 364560 \\ \hline 395768 \end{array}$	<p>1m</p> <p>1m</p> <p>1m</p>	<p>Working must be carried through to reach a final answer for the award of <b>ONE</b> mark.</p> <p><b>Do not award</b> any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens:</p>	6C7a	Calculations
35	$1\frac{7}{12}$	Up to 2m		6F4 6F5b	Fractions Fractions
36	$\frac{3}{14}$	Up to 2m		6F4 6F5b	Fractions Fractions

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