



THIRD SPACE  
LEARNING

# Key Stage 2 SATs

## Mathematics Practice Test and Mark Scheme

### Paper 1: Arithmetic

Pack 2: 2017 (new curriculum)



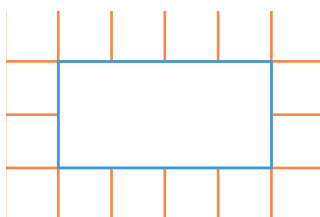
First name	
Last name	
Class	
School	
Score	

## 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**.

1  $44 \times 2 =$

1 mark

2  $3735 + 100 =$

1 mark

3  $459 \times 0 =$

1 mark

4  $742 - 8 =$

1 mark

5   $= 56 \div 7$

1 mark

6  $69\,997 + 5\,601 =$

1 mark

7

$$= 6853 - 684$$

1 mark

8

$$5 \times 7 \times 4 =$$

1 mark

9

$$8.4 + 0.3 =$$

1 mark

10  $726 \div 6 =$

1 mark

11  $3 - 12 =$

1 mark

12  $91 = \square \times 7$

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  $\frac{1}{6} + \square = \frac{5}{12}$

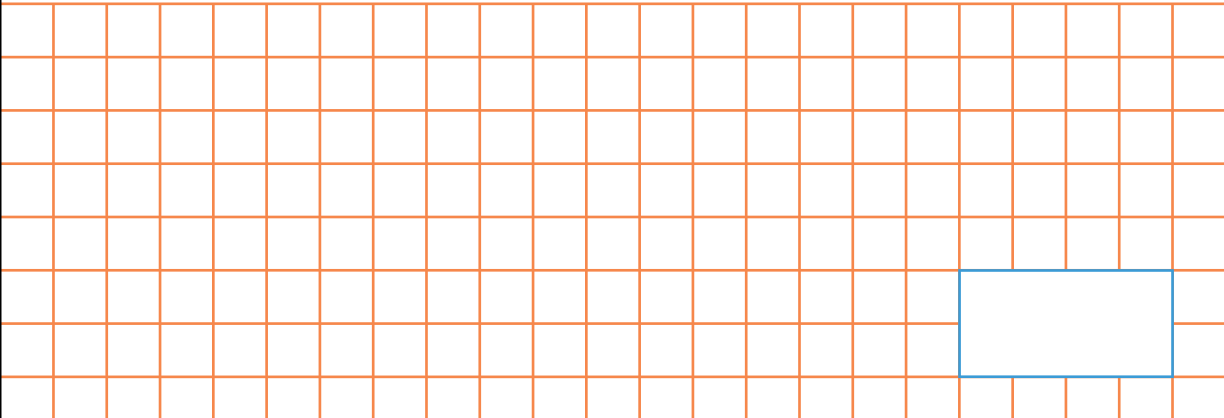
1 mark

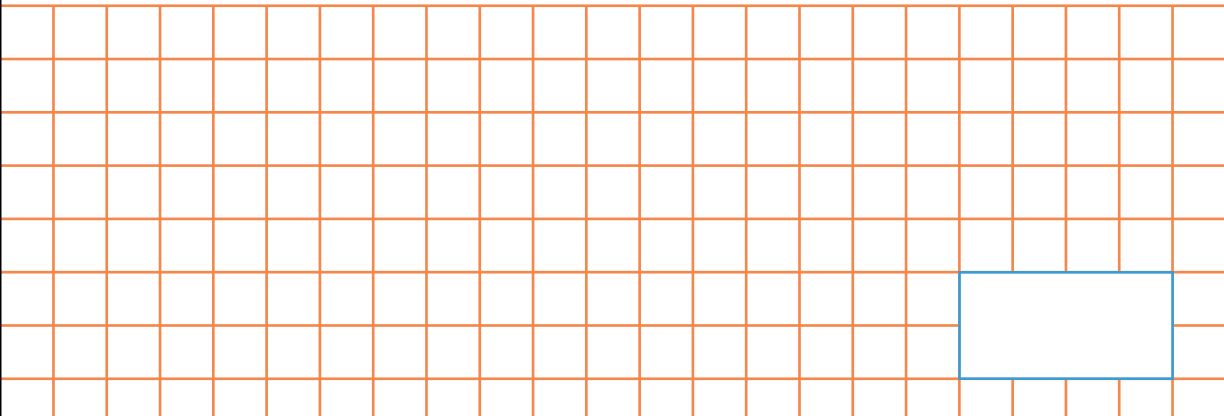
23  $8^2 + 17 =$

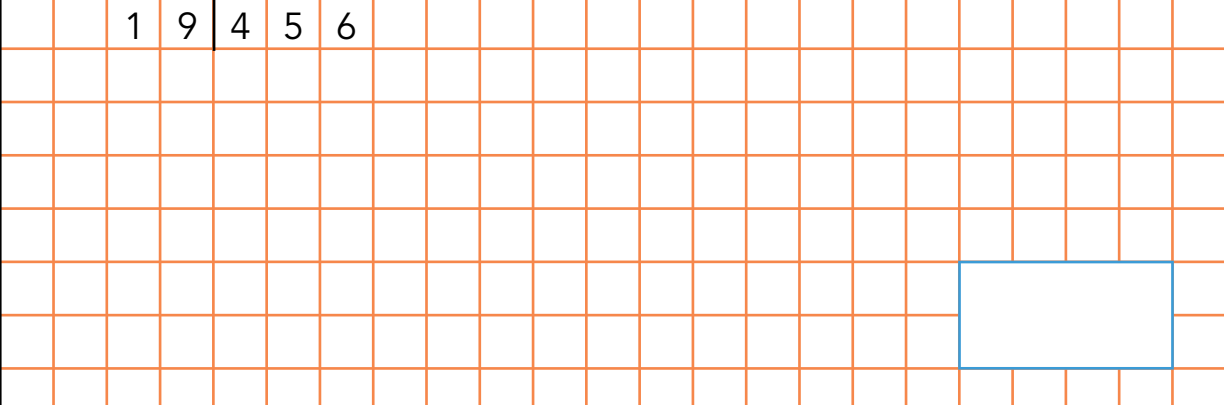
1 mark

24  $1\frac{4}{9} \times 3 =$

1 mark

<b>25</b>	$\frac{5}{6}$ of 240 =	<input type="text"/>	1 mark
			

<b>26</b>	$2.56 \times 7 =$	<input type="text"/>	1 mark
			

<b>27</b>	<table border="1"><tr><td>1</td><td>9</td><td>4</td><td>5</td><td>6</td></tr></table>	1	9	4	5	6	<input type="text"/>	2 marks
	1	9	4	5	6			
Show your method								

28

$$30\% \text{ of } 3\,200 =$$

1 mark

29

$$\begin{array}{r} 46 \\ \times 23 \\ \hline \end{array}$$

Show  
your  
method

2 marks

30

$$\frac{3}{4} \div 3 =$$

1 mark

31  $7 + 3 \times 5 =$

1 mark

32

$$27 \mid 1431$$

Show  
your  
method

2 marks

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

1 mark

<b>34</b>	$\begin{array}{r} 5208 \\ \times \quad 76 \\ \hline \end{array}$	<input type="text"/>
	Show your method	

<b>35</b>	$3\frac{1}{4} - 1\frac{2}{3} =$	<input type="text"/>
		2 marks

<b>36</b>	$\frac{6}{7} \div 4 =$	<input type="text"/>
		2 marks

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.

Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
1	88	1m		5C6a	Calculations
2	3835	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	6169	1m		4C2	Calculations
8	140	1m		4C6b	Calculations
9	8.7	1m		4F8	Fractions
10	121	1m		5C7b	Calculations
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		5F8	Fractions
15	12 000	1m		5C6a	Calculations
16	2 397 562	1m		5C2	Calculations
17	5/7	1m	<b>Accept</b> equivalence	4F4	Fractions
18	30 700	1m		6F9a	Fractions
19	700	1m		5C6a	Calculations
20	14.695	1m		5F8	Fractions



Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
21	9 999 899	1m		5C2	Calculations
22	3/12 or 1/4	1m	<b>Accept</b> equivalence	5F4	Fractions
23	81	1m		6C9	Calculations
24	3 12/9 or 4 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</p> <p>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.           <math display="block">  \begin{array}{r}  24 \text{ r } 2 \\  19 \overline{) 456} \\  \underline{- 380} \quad (20 \times 19) \\  76 \\  \underline{- 74} \text{ (error)} \quad (4 \times 19) \\  2  \end{array}  \quad \text{OR} \quad  \begin{array}{r}  24 \text{ r } 10 \\  19 \overline{) 456} \\  \underline{- 38} \quad (2 \times 19) \\  86 \text{ (error)} \\  \underline{- 76} \quad (4 \times 19) \\  10  \end{array}  </math> </li> <li>short division algorithm, e.g.           <math display="block">  \begin{array}{r}  23 \text{ r } 18 \text{ (error)} \\  19 \overline{) 456}  \end{array}  </math> </li> </ul>	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	Fractions

Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
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}  \quad \text{OR} \quad  \begin{array}{r}  46 \\  \times 23 \\  \hline  136 \text{ (error)} \\  + 920 \\  \hline  1046  \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><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> $  \begin{array}{r}  46 \\  \times 23 \\  \hline  138 \\  + 92 \text{ (place value error)} \\  \hline  230  \end{array}  $	5C7a	Calculations
30	1/4	1m	<b>Accept</b> equivalence	6F5b	Fractions
31	22	1m		6C9	Calculations

Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
32	<p>Award <b>TWO</b> marks for the correct answer of 53</p> <p>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.           <math display="block">\begin{array}{r} 54r13 \\ 27 \overline{)1431} \\ - 1350 \text{ (50 x 27)} \\ \hline 0121 \text{ (error)} \\ - 108 \text{ (4 x 27)} \\ \hline 13 \end{array} \quad \text{OR} \quad \begin{array}{r} 53r3 \\ 27 \overline{)1431} \\ - 135 \text{ (5 x 27)} \\ \hline 0081 \\ - 78 \text{ (error)(3 x 27)} \\ \hline 3 \end{array}</math> </li> <li>short division algorithm, e.g.           <math display="block">\begin{array}{r} 53r10 \\ 27 \overline{)1431} \text{ (error)} \end{array}</math> </li> </ul>	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	5/14	1m	<b>Accept</b> 20/50 or equivalent fraction	6F5a	Fractions

Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
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> $\begin{array}{r} 5208 \\ \times 76 \\ \hline 31248 \\ 364560 \\ \hline 395708 \end{array} + \quad \text{OR} \quad \begin{array}{r} 5208 \\ \times 76 \\ \hline 31208 \text{ (error)} \\ 364560 \\ \hline 395768 \end{array} +$	<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 7/12	Up to		6F4	Fractions
36	3/14	2m		6F5b	Fractions



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## Third Space Learning Year 6 Maths SATs Foundation

Prepare early for SATs with 1-to-1 tuition starting in September. Our 1-to-1 Maths specialists will work with your target pupils to plug gaps, secure key concepts and develop problem solving skills.

Find out more here: <http://bit.ly/Y6Maths>

"Third Space has done wonders for pupils' attitudes towards maths - they look forward to their sessions. Also the fact I can pick and choose quality sessions is a huge asset."

Lisa Graham, Deputy Head, St Hughes C-of-E Primary

"My tutor understands when I don't get things right. She helps me through at a steady pace and always believes I can do it :)"

Millie, Year 5, Worcester