THIRD SPACE LEARNING

Key Stage 2 SATs

Mathematics Practice Test and Mark Scheme

Paper 1: Arithmetic

Pack 2: 2017 (new curriculum)

Third Space Learning

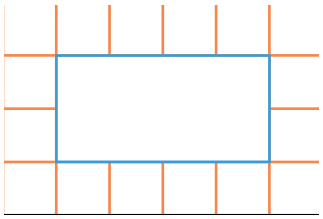
First name	
Last name	
Class	
School	
Score	

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.

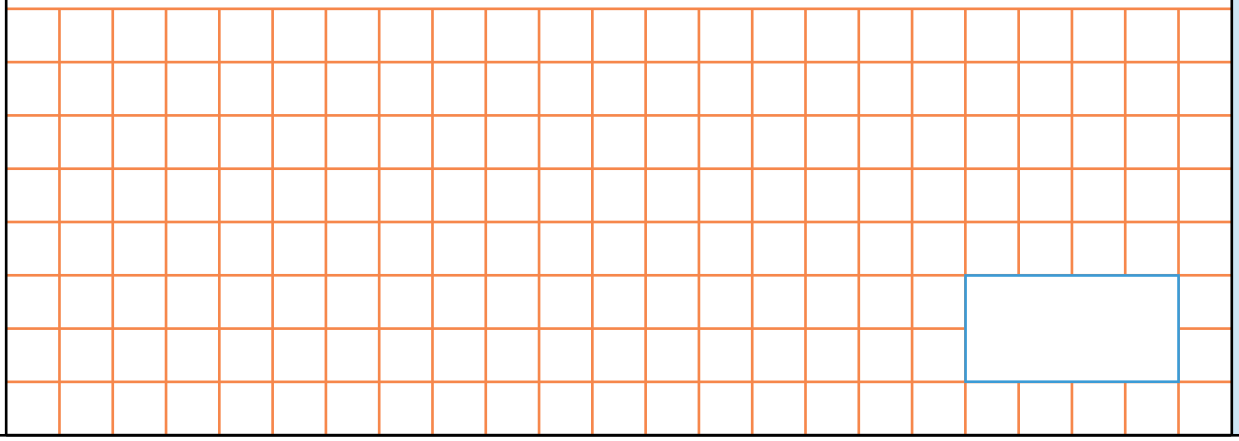


- All answers should be given as a single value.
- For questions expressed as common fractions or mixed numbers, you should give your answers as common fractions or mixed numbers.
- If you cannot do a question, **go on to the next one**. You can come back to it later, if you have time.
- If you finish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

Marks

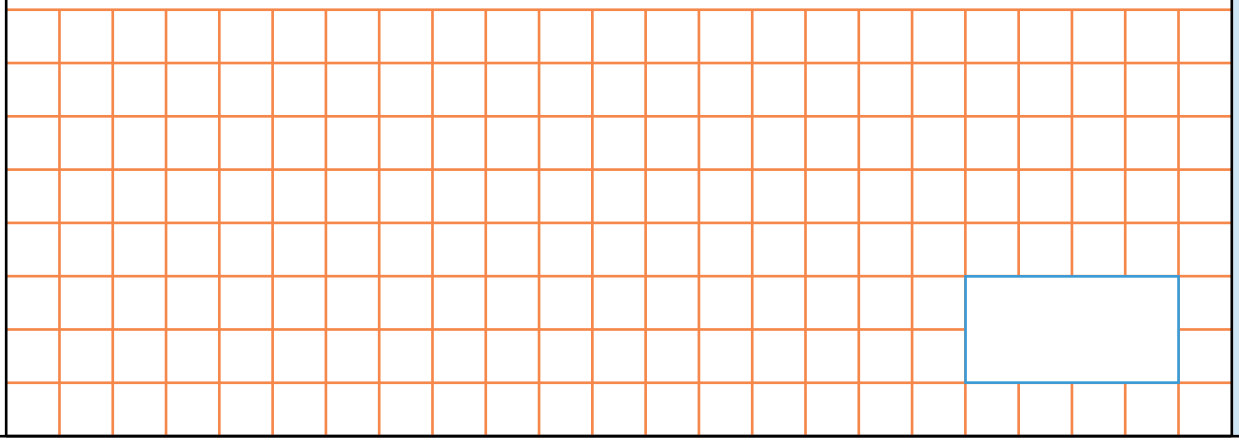
- The number under each box at the side of the page tells you the maximum number of marks for each question.
- In this test, long division and long multiplication questions are worth **TWO** marks each. You will be awarded **TWO** marks for a correct answer. You may get **ONE** mark for showing a formal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

1 44 x 2 =



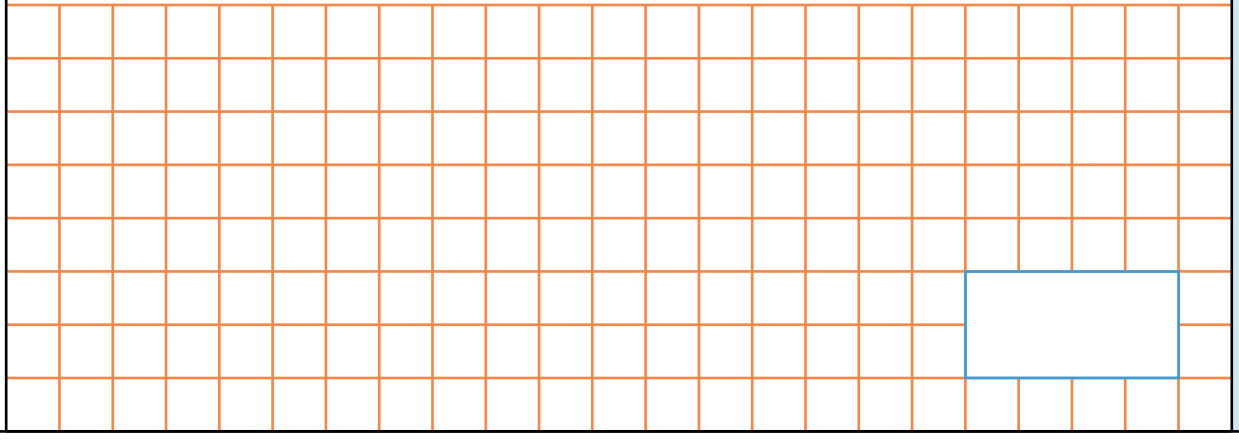
1 mark

2 3735 + 100 =



1 mark

3 459 x 0 =



1 mark

4 742 - 8 =

1 mark

5 ☐ = 56 ÷ 7

1 mark

6 69 997 + 5 601 =

1 mark

7 $\square$ = 6853 - 684

1 mark

8 5 x 7 x 4 =

1 mark

9 8.4 + 0.3 =

1 mark

10 $726 \div 6 =$

1 mark

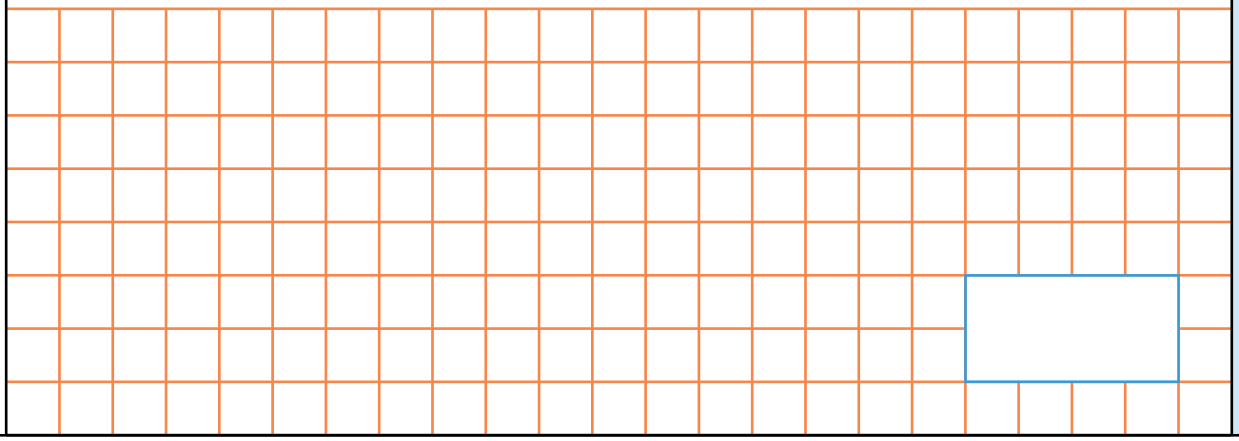
11 $3 - 12 =$

1 mark

12 $91 = \square \times 7$

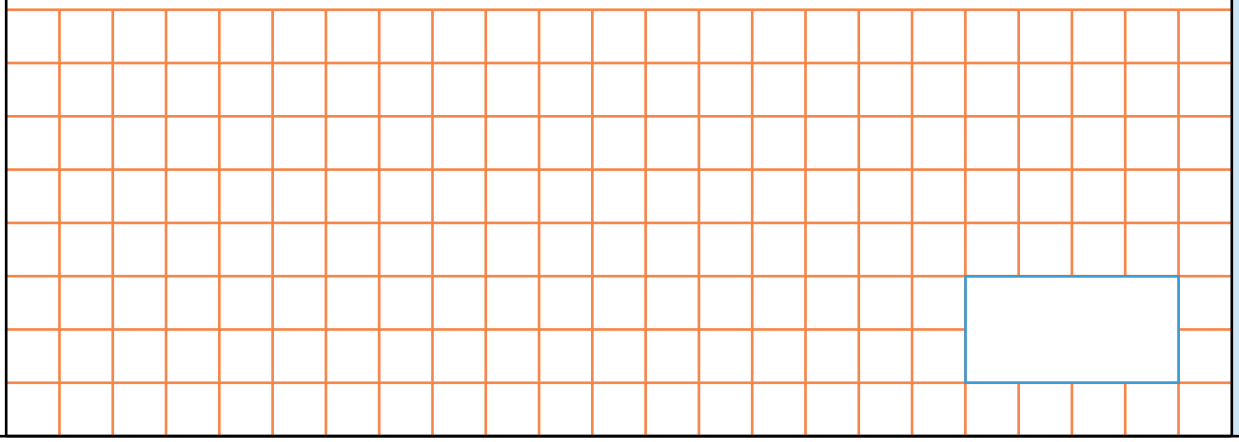
1 mark

13 $263 \div 100 =$



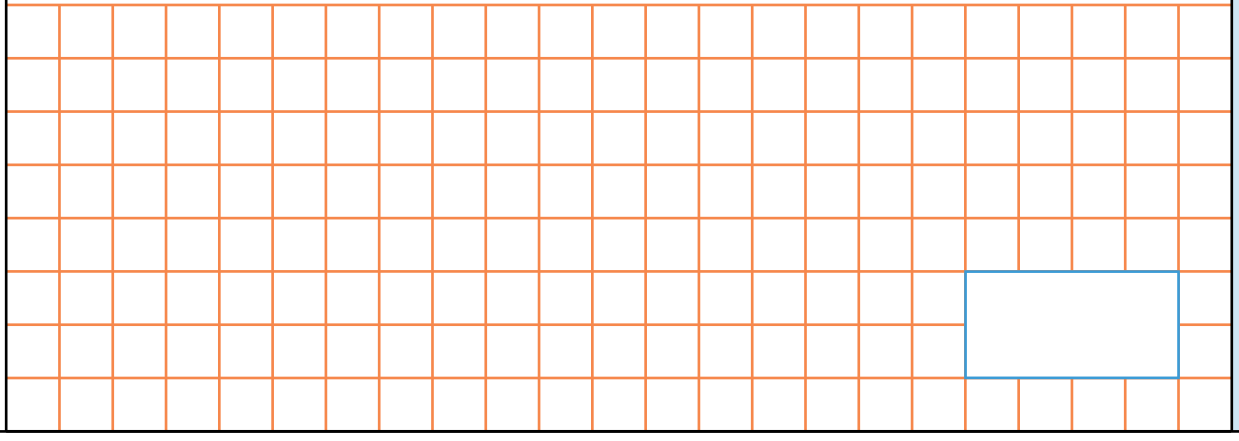
1 mark

14 $26.8 + 1.002 =$



1 mark

15 $40 \times 300 =$



1 mark

16 2 407 562 - 10 000 =

1 mark

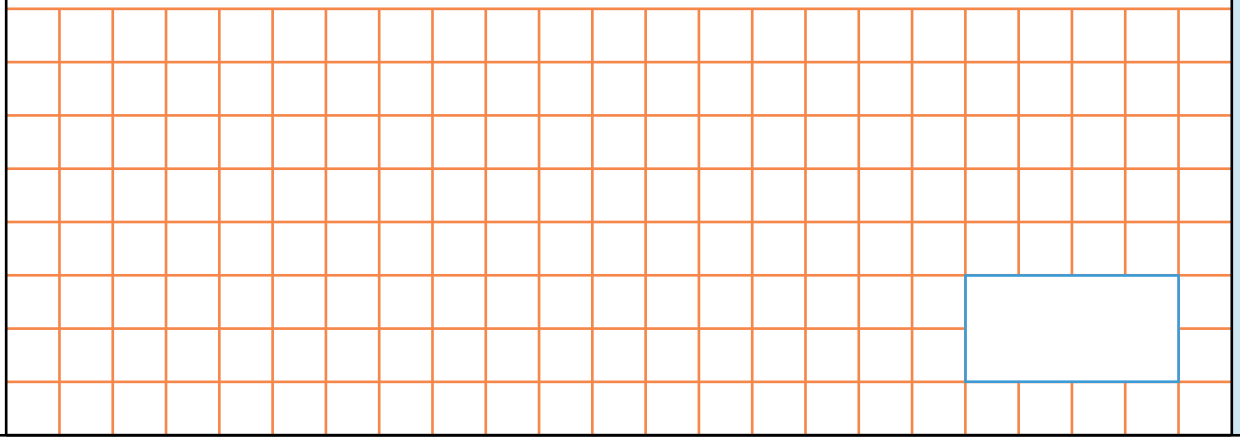
17 $\frac{3}{7} + \frac{2}{7} =$

1 mark

18 1 000 x 30.7 =

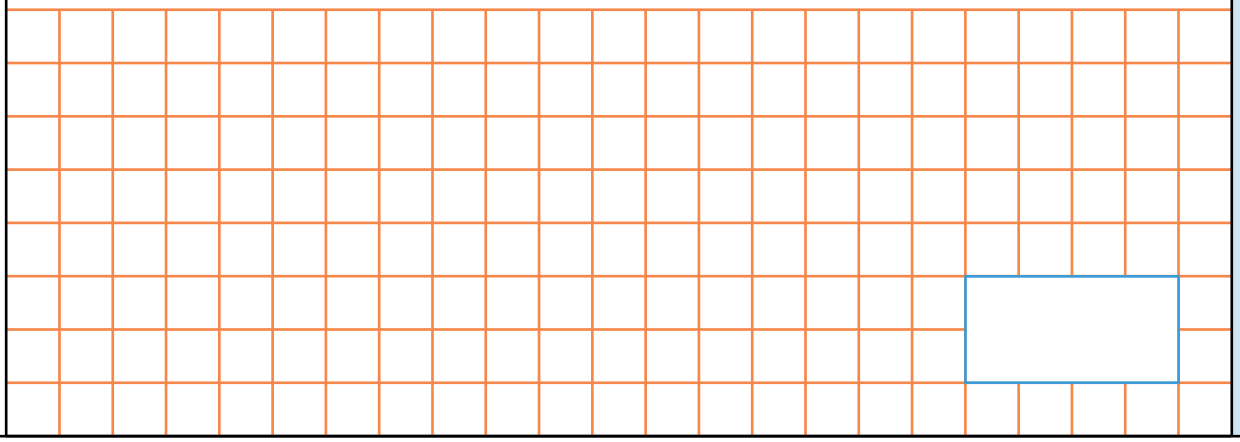
1 mark

19 7 700 ÷ 11 =



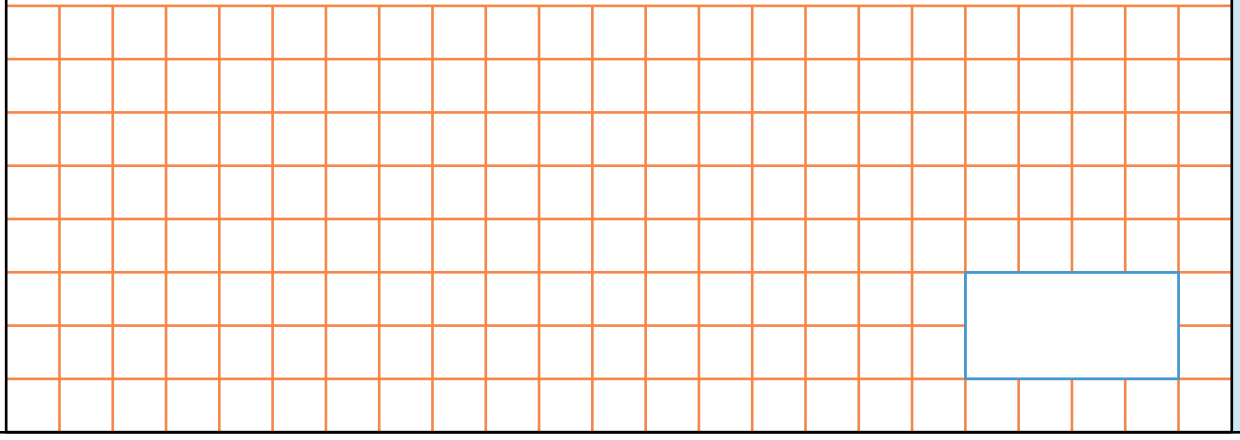
1 mark

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

25 $\frac{5}{6}$ of 240 =

1 mark

26 2.56 x 7 =

1 mark

27 1 9 4 5 6

Show your method

2 marks

28 30% 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 $2\overline{)7\,1\,4\,3\,1}$

Show your method

2 marks

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

1 mark

34

Show your method

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

1 mark

35

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

2 marks

36

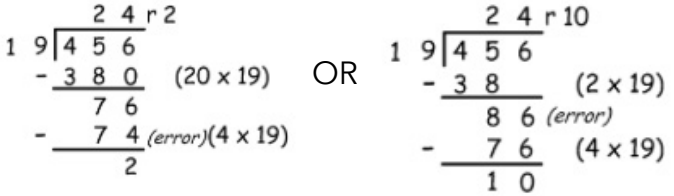
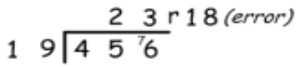
$$\frac{6}{7} \div 4 =$$

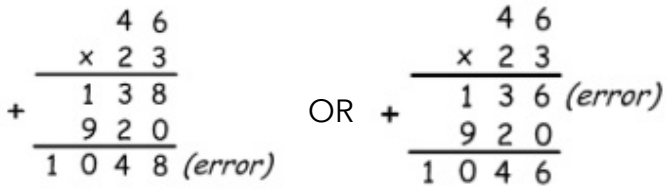
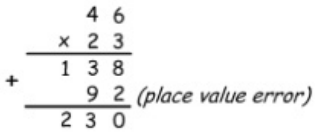
2 marks

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	**Do not** 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	**Accept** 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	**Accept** equivalence	5F4	Fractions
23	81	1m		6C9	Calculations
24	3 12/9 or 4 1/3	1m	**Accept** equivalence	5F5	Fractions
25	200	1m		4F10a	Fractions
26	17.92	1m		6F9b	Fractions
27	Award **TWO** marks for the correct answer of 24 If the answer is incorrect, award **ONE** mark for the formal methods of division with no more than **ONE** arithmetical error, i.e. • long division algorithm, e.g.  • short division algorithm, e.g.  	Up to 2m	Working must be carried through to reach a final answer for the award of **ONE** mark. 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.	6C7b	Fractions

Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
28	960	1m		6R2	Ratio
29	Award **TWO** marks for the correct answer of 1 058 If the answer is incorrect, award **ONE** mark for the formal method of long multiplication with no more than **ONE** arithmetical error, e.g.  	Up to 2m	Working must be carried through to reach a final answer for the award of **ONE** mark. **Do not award** any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens:  	5C7a	Calculations
30	1/4	1m	**Accept** equivalence	6F5b	Fractions
31	22	1m		6C9	Calculations

Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
32	Award **TWO** marks for the correct answer of 53 If the answer is incorrect, award **ONE** mark for the formal methods of division with no more than **ONE** arithmetical error, i.e. • long division algorithm, e.g. $\begin{array}{r} 54\text{r}13 \\ 27\overline{)1431} \\ -1350 \quad (50\times27) \\ \hline 0121 \quad \textit{(error)} \\ -\ 108 \quad (4\times27) \\ \hline 13 \end{array}$ OR $\begin{array}{r} 53\text{r}3 \\ 27\overline{)1431} \\ -135 \quad (5\times27) \\ \hline 0081 \\ -\ 78 \quad \textit{(error)}(3\times27) \\ \hline 3 \end{array}$ • short division algorithm, e.g. $\begin{array}{r} 53\text{r}10 \\ 27\overline{)1431} \quad \textit{(error)} \end{array}$	Up to 2m	Working must be carried through to reach a final answer for the award of **ONE** mark. 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.	6C7b	Calculations
33	5/14	1m	**Accept** 20/50 or equivalent fraction	6F5a	Fractions

Q	Requirement	Mark	Additional guidance	Content Domain Ref	Requirement
34	Award **TWO** marks for the correct answer of 395 808 If the answer is incorrect, award **ONE** mark for the formal method of long multiplication with no more than **ONE** arithmetical error, e.g. 5 2 0 8 x 7 6 3 1 2 4 8 3 6 4 5 6 0 + 3 9 5 7 0 8 *(error)* OR 5 2 0 8 x 7 6 3 1 2 0 8 *(error)* 3 6 4 5 6 0 + 3 9 5 7 6 8	1m 1m 1m	Working must be carried through to reach a final answer for the award of **ONE** mark. **Do not award** any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens:	6C7a	Calculations
35	1 7/12	Up to		6F4	Fractions
36	3/14	2m		6F5b	Fractions

THIRD SPACE
LEARNING

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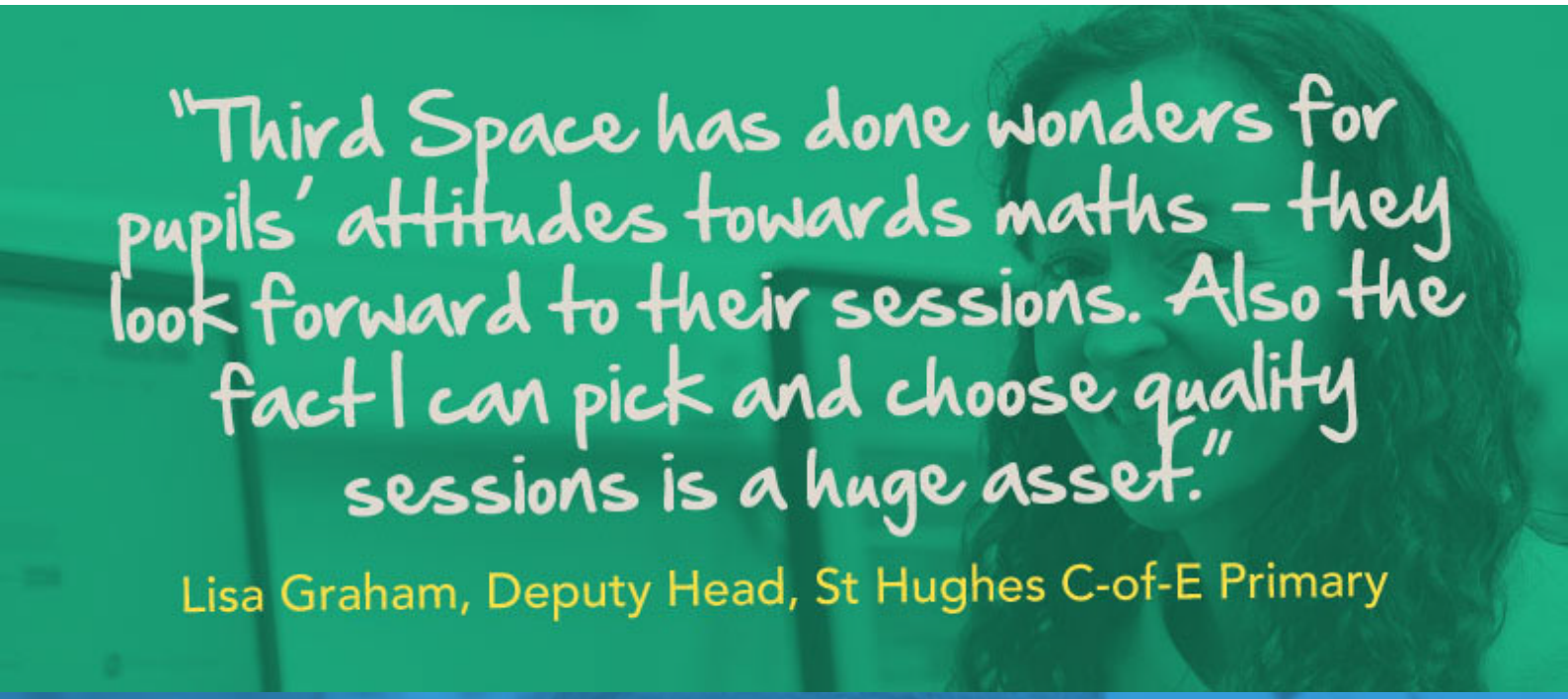

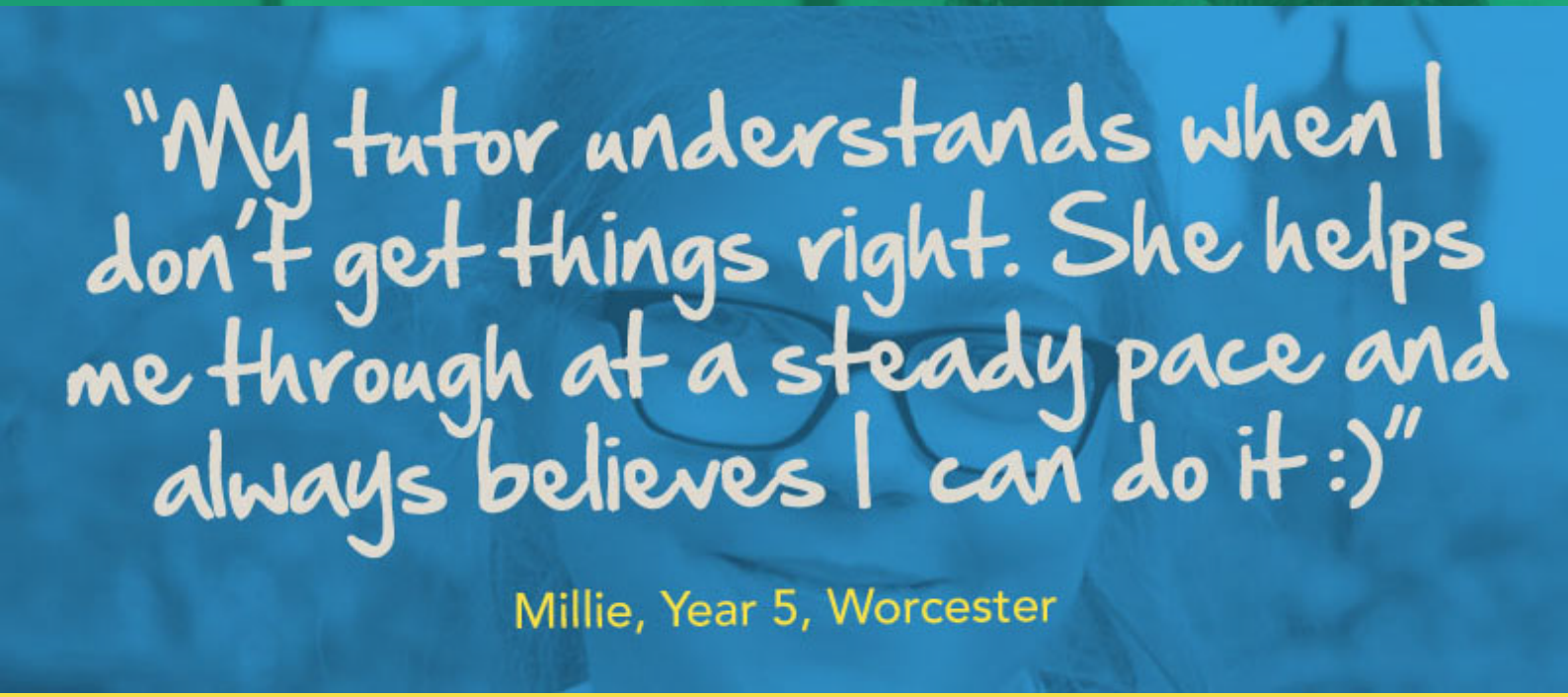

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