

Key Stage 2 SATs

Mathematics Practice Test and Mark Scheme

Paper 2: Reasoning

Pack 1: 2016 (new curriculum)

Third Space Learning

First name	
Last name	
Class	
Score	/ 35

Instructions

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

Questions and answers

- Follow the instructions for each question.
- Work as quickly and as carefully as you can.
- If you need to do working out, you can use the space around the question.
- Do not write over any barcodes.
- Some questions have a method box like this:

- For these questions, you may get a mark for showing your method.
- 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 line at the side of the page tells you the maximum number of marks for each question.

Third Space Learning

Write the missing value to make this number sentence correct.

+ 100 = 14,507

This table shows average house prices in five cities in Britain:

Town	Average house price
Portsmouth	£215,700
Bournemouth	£265,000
Southampton	£214,600
Edinburgh	£203,500
Bristol	£253,400

Which of these cities has the **lowest** average property price?

Write the **three** missing digits to make this subtraction correct.



This table shows the number of new car registrations in one year.

Brand	Registrations
Fiat	38,549
Hyundai	56,580
Jaguar	19,958
Land Rover	49,015
Toyota	62,030

What was the combined total of the two highest selling brands?



Volvo had **11,515 fewer** registrations than Fiat. Complete the table to show the number of Volvo registrations.

Brand	Registrations
Fiat	38,549
Hyundai	56,510
Jaguar	19,958
Land Rover	49,015
Toyota	62,030
Volvo	



1 mark

Third Space Learning

6 Draw the **reflection** of the shape in the mirror line.



$$7 \frac{2}{6} + \frac{3}{12} + \frac{1}{3} = ----$$

1 mark

Write the letter for each fraction in order of size starting with the **smallest** fraction.

One has been done for you.



8

Put the correct symbol, < or >, in each box.



1 mark





8 oranges cost £1.52.



4 oranges and a banana cost 90p.



How much does **one banana** cost? Show your method.









Third Space Learning

11 This diagram shows some parcels on a balance scale. Each small parcel is identical.

Calculate the weight of **one** small parcel, in grams.









If t = 12, what is 5t + 8?



13 In the sale a pair of boots has been **reduced** by 25%. They now cost £37.50. What was the original price of the boots?





14 Complete this calculation using two different **prime numbers**.



15 A delivery company charges £9.75 to deliver parcels weighing up to 20kg, then 30p for every 500 grams over that weight.

How much would they charge to deliver a parcel weighing 32kg?





16 Write the number that is twenty less than one million.



Write the number that is ten thousand less than ten million.

17 Calculate the sizes of angles a and b. The diagram is not to scale.







1 mark



Third Space Learning

19 Shape A is an isosceles triangle drawn on co-ordinate axes.

Write the missing co-ordinate.



²⁰ Mr and Mrs Scott have employed a decorator to paint their kitchen and lay a new floor.

The decorator charges £10 per hour. The paint costs £11.40 per litre. Flooring costs £26.70 per m² The decorator spends $18\frac{1}{2}$ hours decorating the kitchen.

He uses 3 litres of paint and 20m² of flooring.

Calculate the total cost to decorate the kitchen.



£		

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 very it according to the standard individual children are working at.

The national curriculum test allows 40 minutes to complete this test.

Demand Descriptors

- T = Working towards expected standard
- E = Working at expected standard
- G = Working at greater depth within expected standard

Q	Required answer	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand	
1	a) 1,003 circled	1m	Accept alternative unambiguous indications, e.g. numbers ticked or	3N2a	Number	Т	
	b) 14,407	1m	underlined	3N2b	Number	т	
2	Edinburgh	1m		5N2	Number	E	
3	Award TWO marks for:	Up to		5C2	Calculation	E	
	7 3 7 	2m				E	
	2 5 4 If the answer is incorrect, award ONE						
	mark for two digits correct.						
4	a) 118,610	1m		4S1	Statistics	Т	
	b) 27,034	1m		5S1	Statistics	Т	
5	237	1m		3C4	Calculation	Т	
6	Diagram completed as shown:	1m	Accept slight inaccuracies, provided the intention is clear	4G2c	Geometry	E	

Q	Required answer	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand	
7	a) <u>11</u> 12	1m	Accept equivalent fractions, e.g. 22/24	6F4	Fractions	E	
	b) B E A D C	1m	Accept: 12 E 9/10 1 3/4 40/30	6F3	Fractions	E	
8	<	1m		5F8	Fractions	E	
	<	1m		6F3		E	
9	Award TWO marks for the correct	Up to	Accept for TWO marks a clear	3M9a	Measures	E	
	answer of 14p	2m	indication of the correct amount, e.g.			E	
			£0.14, £0.14p				
	If the answer is incorrect award ONE						
	mark for evidence of an appropriate		Accept for ONE mark an answer of				
	method, e.g.		0.14p, £14p or £14 as evidence of an				
	152 ÷ 2 = 76		appropriate method				
	90 - 76						
	OR						
	152 ÷ 8 = 19						
	4 x 19 = 76						
	90 - 76						
10	8	1m		3C7	Calculation	Т	

Q	Required answer	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand	
11	Award TWO marks for the correct	Up to	Accept for TWO marks a clear	5M9C	Measures	E	
	answer of 325g	2m	indication of the correct amount, e.g.			E	
	If the answer is incorrect award ONE		ukg 525g, 0.525kg				
	mark for evidence of an appropriate		Accept for ONE mark an answer of				
	method, e.g.		325kg as evidence of an appropriate				
	2,625-1,650 = 975		method				
	975 ÷ 3						
12	p = 4	1m		6A2	Algebra	E	
	68	1m		6A2		E	
13	Award TWO marks for the correct	Up to	Accept for TWO marks a clear	6R2	Ratio and	G	
	answer £50	2m	indication of the correct amount, e.g.		proportion	G	
			£50.00, £50-00				
	If the answer is incorrect award ONE						
	mark for evidence of an appropriate						
	method, e.g.		Accept for ONE mark an answer of				
	$f37.50 \div 3 = f12.50$		£50p or £5000p as evidence of an				
	£37.50 + £12.50		appropriate method				
14	13 x 19 = 247 OR 19 x 13 = 247	1m		6C5	Calculation	G	
	1						

Q	Required answer	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand	
15	Award TWO marks for the correct answer £16.95	Up to 2m	Accept for TWO marks a clear indication of the correct amount, e.g. 1695p, £16,95p	5M5	Measures	G G	
	If the answer is incorrect award ONE		Accort for ONE mark an answor				
	method, e.g.		of £1695, £169.50 or £1695p as				
	30 x 24 = 720 720 + 975		evidence of an appropriate method				
16	a) 999,980 b) 9,990,000	1m 1m		6N2 6N2	Number	E	
17	a) 48° b) 35°	1m 1m		6G4a 6G4a	Geometry Geometry	E	
18	a) 40	1m 1m		6C8	Calculation	E	
19	(-1,-3)	1m		6P3	Geometry	E	

Q	Required answer	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand	
20	Award THREE marks for the correct answer £753.20	3m	Accept for THREE marks a clear indication of the correct amount, e.g.	6C8	Calculation	G G	
			£753.20p, £753 20, £753-20			G	
	If the answer is incorrect award TWO						
	marks for:		Two marks can be awarded if a				
	• Sight of £185 AND £34.20 AND		misread number is followed through				
	£534		correctly				
	• Evidence of appropriate methods						
	with no more than one arithmetic						
	error						
	If the answer is incorrect award ONE						
	mark for evidence of an appropriate						
	complete method						

Balance of difficulty of questions in the paper

5 marks at working towards 22 marks at the expected standard 8 marks at working at greater depth

Thresholds

Working towards the expected standard: Criteria for 'working at the expected standard' have not been met.

Working at the expected standard: at least 11 of the 22 'expected' marks are obtained, together with all 5 of the working towards marks, but none of the 8 marks graded 'greater depth'. This mark is 16 out of 35.

Working at greater depth: all of the 5 working toward marks are obtained, plus at least 90% of the 'expected' marks and at least 50% of the 'greater depth' marks. This mark is 29 out of 35.



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