



THIRD SPACE
LEARNING

Key Stage 2 SATs

Mathematics Practice Test and Mark Scheme

Paper 2: Reasoning

Pack 1: 2016 (new curriculum)



1 Circle the number that is closest to 1,000

1,003 909 1,090 996

1 mark

Write the missing value to make this number sentence correct.

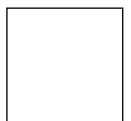
$$\boxed{} + 100 = 14,507$$

1 mark

- 2 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?



1 mark

3

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

$$\begin{array}{r} 737 \\ - 4\boxed{}3 \\ \hline \boxed{}5\boxed{} \\ \hline \end{array}$$

2 marks

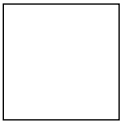
Volvo had **11,515 fewer** registrations than Fiat. Complete the table to show the number of Volvo registrations.

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

1 mark

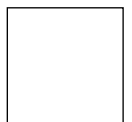
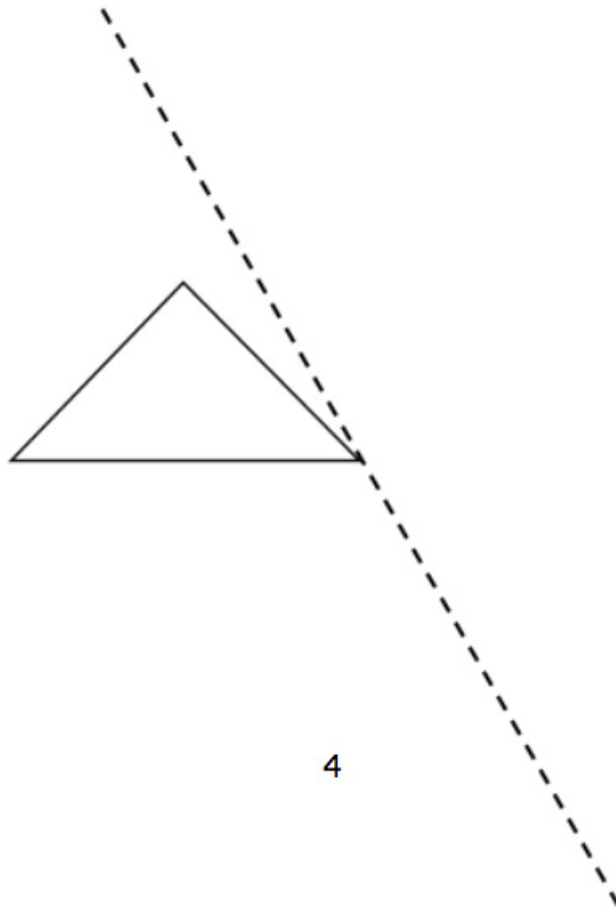
5

$$140 + 77 = \boxed{} - 20$$



1 mark

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



1 mark

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.

- A. $\frac{9}{10}$ B. $\frac{1}{2}$ C. $1\frac{3}{4}$ D. $\frac{40}{30}$ E. $\frac{4}{5}$

_____ **E** _____

1 mark

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

$$3.033 \quad \square \quad 3.3$$

$$2\frac{3}{7} \quad \square \quad 2\frac{4}{6}$$

1 mark

1 mark

10

24 x

= 192

1 mark

12 Work out the value of p .

$$7p - 4 = 24$$

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

1 mark

1 mark

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

$$\boxed{} \times \boxed{} = 247$$

1 mark

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

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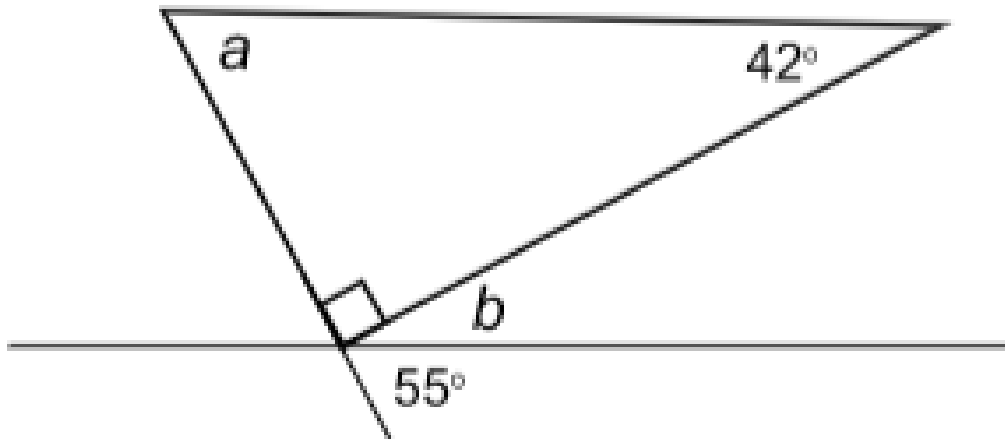
1 mark

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

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1 mark

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



$a =$	<input type="text"/>	$^{\circ}$	<input type="text"/>
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1 mark

$b =$	<input type="text"/>	$^{\circ}$	<input type="text"/>
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1 mark

18 Write the missing numbers.

$$100 \div \boxed{} = 2.5$$

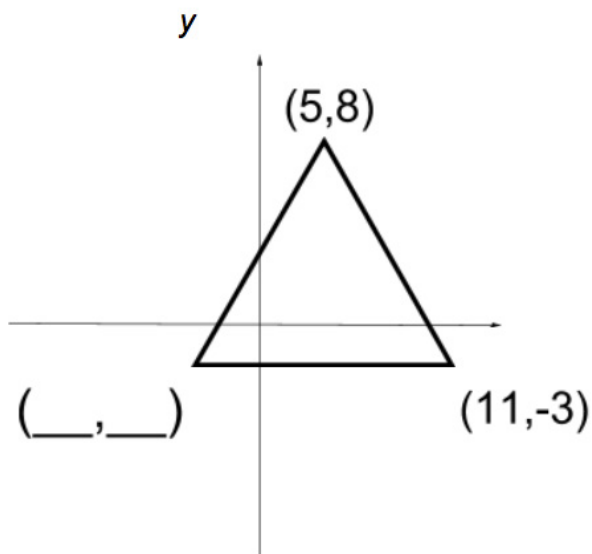
1 mark

$$30 \times \boxed{} = 27$$

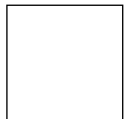
1 mark

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

Write the missing co-ordinate.



A
x



1 mark

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.

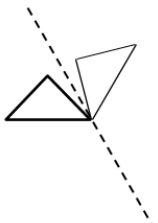
The national curriculum test allows 40 minutes to complete this test.

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 underlined	3N2a	Number	T
	b) 14,407	1m		3N2b	Number	T
2	Edinburgh	1m		5N2	Number	E
3	<p>Award TWO marks for:</p> $ \begin{array}{r} 7 \quad 3 \quad 7 \\ - \quad 4 \quad \boxed{8} \quad 3 \\ \hline \boxed{2} \quad 5 \quad \boxed{4} \end{array} $ <p>If the answer is incorrect, award ONE mark for two digits correct.</p>	Up to 2m		5C2	Calculation	E E
4	a) 118,610	1m		4S1	Statistics	T
	b) 27,034	1m		5S1	Statistics	T
5	237	1m		3C4	Calculation	T
6	<p>Diagram completed as shown:</p> 	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) $\frac{11}{12}$	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	<p>Award TWO marks for the correct answer of 14p</p> <p>If the answer is incorrect award ONE mark for evidence of an appropriate method, e.g.</p> <p>$152 \div 2 = 76$</p> <p>$90 - 76$</p> <p>OR</p> <p>$152 \div 8 = 19$</p> <p>$4 \times 19 = 76$</p> <p>$90 - 76$</p>	Up to 2m	<p>Accept for TWO marks a clear indication of the correct amount, e.g. £0.14, £0.14p</p> <p>Accept for ONE mark an answer of 0.14p, £14p or £14 as evidence of an appropriate method</p>	3M9a	Measures	E E
10	8	1m		3C7	Calculation	T

Q	Required answer	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand
11	<p>Award TWO marks for the correct answer of 325g</p> <p>If the answer is incorrect award ONE mark for evidence of an appropriate method, e.g. $2,625 - 1,650 = 975$ $975 \div 3$</p>	<p>Up to 2m</p>	<p>Accept for TWO marks a clear indication of the correct amount, e.g. 0kg 325g, 0.325kg</p> <p>Accept for ONE mark an answer of 325kg as evidence of an appropriate method</p>	5M9C	Measures	<p>E</p> <p>E</p>
12	<p>$p = 4$ 68</p>	<p>1m</p> <p>1m</p>		<p>6A2</p> <p>6A2</p>	Algebra	<p>E</p> <p>E</p>
13	<p>Award TWO marks for the correct answer £50</p> <p>If the answer is incorrect award ONE mark for evidence of an appropriate method, e.g. $£37.50 \div 3 = £12.50$ $£37.50 + £12.50$</p>	<p>Up to 2m</p>	<p>Accept for TWO marks a clear indication of the correct amount, e.g. £50.00, £50-00</p> <p>Accept for ONE mark an answer of £50p or £5000p as evidence of an appropriate method</p>	6R2	Ratio and proportion	<p>G</p> <p>G</p>
14	<p>$13 \times 19 = 247$ OR $19 \times 13 = 247$</p>	<p>1m</p>		6C5	Calculation	G

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 If the answer is incorrect award ONE mark for evidence of an appropriate method, e.g. 30 x 24 = 720 720 + 975	Up to 2m	Accept for TWO marks a clear indication of the correct amount, e.g. 1695p, £16.95p Accept for ONE mark an answer of £1695, £169.50 or £1695p as evidence of an appropriate method	5M5	Measures	G G
16	a) 999,980 b) 9,990,000	1m 1m		6N2 6N2	Number	E E
17	a) 48° b) 35°	1m 1m		6G4a 6G4a	Geometry Geometry	E E
18	a) 40 b) 0.9	1m 1m		6C8	Calculation	E 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	<p>Award THREE marks for the correct answer £753.20</p> <p>If the answer is incorrect award TWO marks for:</p> <ul style="list-style-type: none"> • Sight of £185 AND £34.20 AND £534 • Evidence of appropriate methods with no more than one arithmetic error <p>If the answer is incorrect award ONE mark for evidence of an appropriate complete method</p>	3m	<p>Accept for THREE marks a clear indication of the correct amount, e.g. £753.20p, £753 20, £753-20</p> <p>Two marks can be awarded if a misread number is followed through correctly</p>	6C8	Calculation	G G G

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.



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"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