THIRD SPACE LEARNING

Key Stage 2 SATs Paper 2: Reasoning Pack 1

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

- 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.

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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.

☐ + 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

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

$$\begin{array}{rrrr} & 7 & 3 & 7 \\ - & 4 & \square & 3 \\ \hline \square & & 5 & \square \end{array}$$

2 marks

4a 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?

1 mark

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4b Volvo had 11,515 fewer registrations than Fiat.
Complete the table to show the number of Volvo registrations.

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

1 mark

5 140 + 77 = ☐ − 20

1 mark

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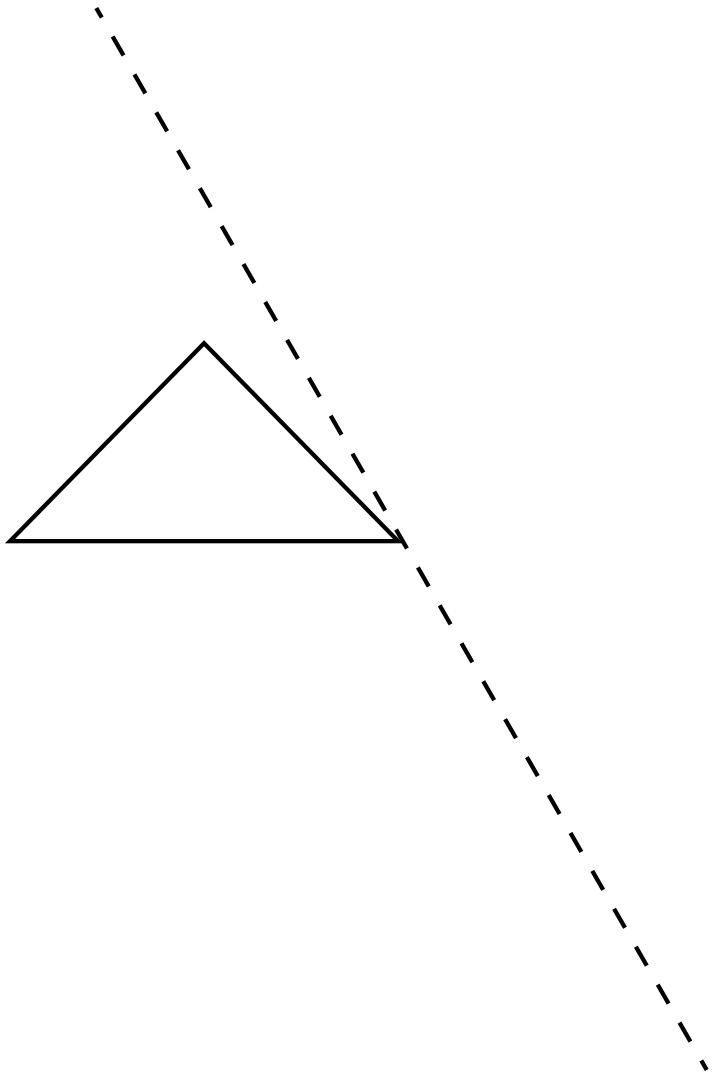
6 Draw the **reflection** of the shape in the mirror line.



1 mark

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

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 ☐ 3.3

1 mark

$2\frac{3}{7}$ ☐ $2\frac{4}{6}$

1 mark

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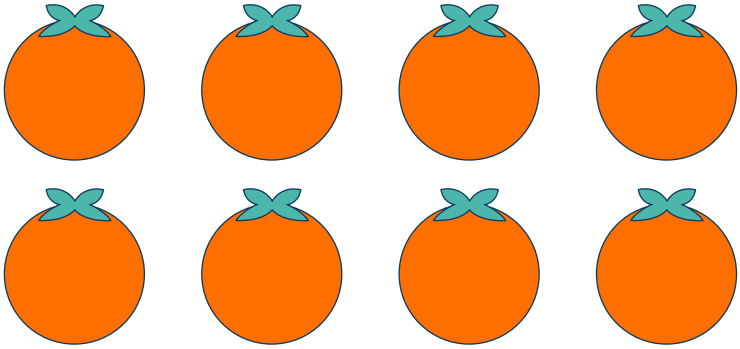
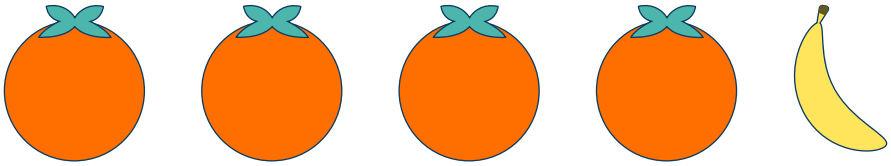
9 8 oranges cost £1.52.



4 oranges and a banana cost 90p.



How much does **one banana** cost?

Show your method.

2 marks

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10 $24 \times \square = 192$

1 mark

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

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

g

2 marks

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12 Work out the value of p.

$7p - 4 = 24$

$p =$ ☐ ☐

1 mark

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

☐ ☐

1 mark

---

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?

£ ☐ ☐

2 marks

---

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

☐ x ☐ = 247

☐

1 mark

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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?

2 marks

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

1 mark

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

1 mark

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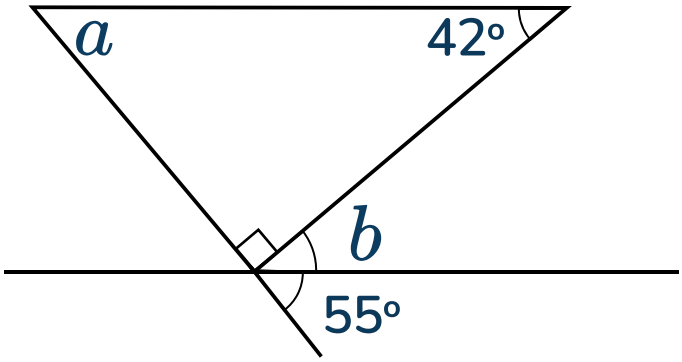
17 Calculate the sizes of angles a and b.
The diagram is not to scale.



$a =$ ° 1 mark

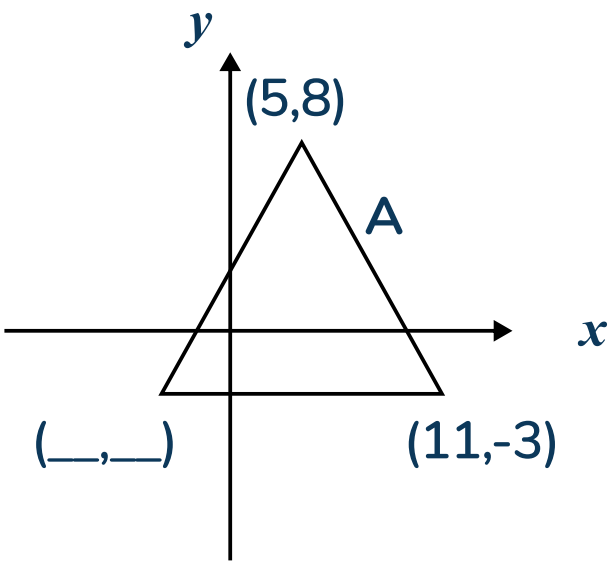
$b =$ ° 1 mark

18 Write the missing numbers.

100 ÷ ☐ = 2.5 1 mark

30 × ☐ = 27 1 mark

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



1 mark

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 m^2

The decorator spends $18\frac{1}{2}$ hours decorating the kitchen.

He uses 3 litres of paint and $20m^2$ of flooring.

Calculate the total cost to decorate the kitchen.

£

3 marks

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

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

Level of demand
(low) 1 = Recall of facts or application of procedures
2 = Use facts and procedures to solve simple problems
3 = Use facts and procedures to solve more complex problems
(high) 4 = Understand and use facts and procedures creatively to solve complex or unfamiliar problems

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Answers

Question Number	Requirement	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand
1	a) 1,003 circled b) 14,407	1m 1m	Accept alternative unambiguous indications, e.g. numbers ticked or underlined	3N2a 3N2b	Number Number	1 1
2	Edinburgh	1m		5N2	Number	2
3	Award **TWO** marks for: 7 3 7 - 4 [8] 3 [2] 5 [4] If the answer is incorrect, award **ONE** mark for two digits correct.	Up to 2m		5C2	Calculation	2
4	a) 118,610 b) 27,034	1m 1m		5S1 5S1	Statistics Statistics	1 1

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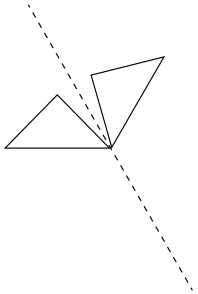
Question Number	Requirement	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand
5	237	1m		3C4	Calculations	1
6	Diagram completed as shown: 	1m	Accept slight inaccuracies, provided the intention is clear	4G2c	Geometry	2
7	a) $\frac{11}{12}$	1m	Accept equivalent fractions, e.g. $\frac{22}{24}$	6F4	Fractions	2
	b) B E A D C	1m	Accept: $\frac{1}{12}$ E $\frac{9}{10}$ 1$\frac{3}{4}$ $\frac{40}{30}$	6F3	Fractions	2
8	< <	1m 1m		5F8 6F3	Fractions	2 2

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Question Number	Requirement	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand
9	Award **TWO** marks for the correct answer of 14p If the answer is incorrect award **ONE** mark for evidence of an appropriate method, e.g. 152 ÷ 2 = 76 90 - 76 OR 152 ÷ 8 = 19 4 x 19 = 76 90 – 76	Up to 2m	Accept for **TWO** marks a clear indication of the correct amount, e.g. £0.14, £0.14p Accept for **ONE** mark an answer of 0.14p, £14p or £14 as evidence of an appropriate method	3M9a	Measures	2
10	8	1m		3C7	Calculation	1

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Question Number	Requirement	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand
11	Award **TWO** marks for the correct answer of 325g If the answer is incorrect award **ONE** mark for evidence of an appropriate method, e.g. 2,625-1,650 = 975 975 ÷ 3	Up to 2m	Accept for **TWO** marks a clear indication of the correct amount, e.g. 0kg 325g, 0.325kg Accept for **ONE** mark an answer of 325kg as evidence of an appropriate method	5M9C	Measures	2
12	**p** = 4 68	1m 1m		6A2 6A2	Algebra	2 2
13	Award **TWO** marks for the correct answer £50 If the answer is incorrect award **ONE** mark for evidence of an appropriate method, e.g. £37.50 ÷ 3 = £12.50 £37.50 + £12.50	Up to 2m	Accept for **TWO** marks a clear indication of the correct amount, e.g. £50.00, £50-00 Accept for **ONE** mark an answer of £50p or £5000p as evidence of an appropriate method	6R2	Ratio and proportion	3

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Question Number	Requirement	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand
14	13 x 19 = 247 **OR** 19 x 13 = 247	1m		6C5	Calculation	3
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	3
16	a) 999,980 b) 9,990,000	1m 1m		6N2 6N2	Number	2 2
17	a) 48 b) 35	1m 1m		6G4a 6G4a	Geometry Geometry	2 2
18	a) 40 b) 0.9	1m 1m		5F10 4F10a	Fractions Fractions	2 2
19	(-1,-3)	1m		6P3	Geometry	3

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Question Number	Requirement	Mark	Acceptable answer or additional guidance	Content Domain Ref	NC strand	Level of demand
20	Award **THREE** marks for the correct answer £753.20 If the answer is incorrect award **TWO** marks for: • Sight of £185 **AND** £34.20 **AND** £534 • 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	3m	Accept for **THREE** marks a clear indication of the correct amount, e.g. £753.20p, £753 20, £753-20 **TWO** marks can be awarded if a misread number is followed through correctly	6C8	Calculation	4

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