SCHOLASTIC

YEAR 6
MATHEMATICS
Termly Assessment Tests

Guidance and mark schemes

SCHOLASTIC

Scholastic Education, an imprint of Scholastic Ltd
Book End, Range Road, Witney, Oxfordshire, OX29 0YD
Registered office: Westfield Road, Southam,
Warwickshire CV47 0RA
www.scholastic.co.uk

1 2 3 4 5 6 7 8 9 8 9 0 1 2 3 4 5 6 7

A British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library.

Author and series editor
Paul Hollin

Editorial team
Rachel Morgan, Jenny Wilcox, Audrey Stokes, Vicki Yates ,Mark Walker, Kate Baxter, Christine Vaughan, Julia Roberts, and Janette Ratcliffe

Illustrations
Tom Heard and Moreno Chiacchiera

Design
Nicolle Thomas, Alice Duggan and Oxford Designers & Illustrators Ltd

Acknowledgements

Extracts from Department for Education website © Crown Copyright. Reproduced under the terms of the Open Government Licence (OGL). http://www.nationalarchives.gov.uk/doc/open-government-licence/version/2

Every effort has been made to trace copyright holders for the works reproduced in this book, and the publishers apologise or any inadvertent omissions.

Guidance and mark schemes for mathematics: Year 6

Contents	Page

About this pack

This pack provides you with termly assessment tests to help monitor children's progress in Mathematics throughout the year. The pack consists of this introductory booklet (including mark schemes) and tests that cover a wide range of content taken from the Key Stage 2 programme of study.

Using the termly assessment tests

The termly assessment tests in this pack can be used as you would any other assessment materials. The children need to be familiar with specific test-focused skills, such as ensuring equipment functions properly, leaving questions if they seem too difficult, working at a suitable pace for the tests and checking through their work.

It is intended that one test should be completed towards the end of each term. These tests are short at only 30 or 40 minutes per paper, as they are testing the degree of competence children have.

About the tests

Each maths test has three papers:

- Paper 1: arithmetic – these are context-free calculations. The children have 30 minutes to answer the questions. 40 marks are available.
- Paper 2 and Paper 3: reasoning – these are mathematical reasoning problems both in context and out of context. The children have 40 minutes per paper to answer the questions. 35 marks are available per paper.

The papers should be taken in order and children may have a break between papers. All of the tests broadly increase in difficulty as they progress, and it is not expected that all children will be able to answer all of the questions.

The marks available for each question are shown in the answer booklet next to each question and are also shown next to each answer in the mark scheme.

Test coverage

The test content is divided into strands and sub-strands. These are listed, for each question, in a table on the back cover of every test to allow tracking of difficulties. In a small number of cases, where practical equipment such as containers would be required, these aspects are not tested.

Strand	Sub-strand
Number and place value	counting (in multiples)
	read, write, order and compare numbers
	place value; Roman numerals
	identify, represent and estimate; rounding
	negative numbers
	number problems
Addition, subtraction, multiplication and division (calculations)	add/subtract mentally
	add/subtract using written methods
	estimates, use inverses and check
	add/subtract to solve problems
	properties of number (multiples, factors, primes, squares and cubes)
	multiply/divide mentally
	multiply/divide using written methods
	solve problems (commutative, associative, distributive and all four operations)
	order operations
Fractions	recognise, find, write, name and count fractions
	equivalent fractions
	compare and order fractions
	add/subtract fractions
	multiply/divide fractions
	fractions/decimal equivalence
	rounding decimals
	compare and order decimals
	multiply/divide decimals
	solve problems with fractions and decimals
	fractions/decimal/percentage equivalence
	solve problems with percentages

Strand	Sub-strand
Ratio and proportion	relative sizes, similarity
	use of percentages for comparison
	scale factors
	unequal sharing and grouping
Algebra	missing number problems expressed in algebra
	simple formulae expressed in words
	generate and describe linear number sequences
	number sentences involving two unknowns
	enumerate all possibilities of combinations of two variables
Measurement	compare, describe and order measures
	estimate, measure and read scales
	money
	telling time, ordering time, duration and units of time
	convert between metric units
	convert metric/imperial
	perimeter, area
	volume
	solve problems (money; length; mass/weight; capacity/volume)
Geometry – properties of shape	recognise and name common shapes
	describe properties and classify shapes
	draw and make shapes and relate 2D and 3D shapes (including nets)
	angles – measuring and properties
	parts of a circle including radius, diameter and circumference
Geometry – position and direction	patterns
	describe position, direction and movement
	coordinates
Statistics	interpret and represent data
	solve problems involving data
	mean average

Marking and assessing the papers

The mark schemes and answers are located towards the end of this booklet.

The mark schemes provide details of correct answers including guidance for questions that have more than one mark.

Interpreting answers

The guidance below should be followed when deciding whether an answer is acceptable or not. As general guidance, answers should be unambiguous.

Problem	Guidance
The answer is equivalent to the one in the mark scheme.	The mark scheme will generally specify which equivalent responses are allowed. If this is not the case, award the mark unless the mark scheme states otherwise. For example: $1\frac{1}{2}$ or 1.5
The answer is correct but the wrong working is shown.	A correct response will always be marked as correct.
The correct response has been crossed (or rubbed) out and not replaced.	Do not award the mark(s) for legible crossed-out answers that have not been replaced or that have been replaced by a further incorrect attempt.
The answer has been worked out correctly but an incorrect answer has been written in the answer box.	Where appropriate follow the guidance in the mark scheme. If no guidance is given then: • award the mark if the incorrect answer is due to a transcription error • award the mark if there is extra unnecessary workings which do not contradict work already done • do not award the mark if there is extra unnecessary workings which do contradict work already done.
More than one answer is given.	If all answers are correct (or a range of answers is given, all of which are correct), the mark will be awarded unless specified otherwise by the mark schemes. If both correct and incorrect responses are given, no mark will be awarded.

Problem	Guidance
There appears to be a misread of numbers affecting the working.	In general, the mark should not be awarded. However, in two-mark questions that have a working mark, award one mark if the working is applied correctly using the misread numbers, provided that the misread numbers are comparable in difficulty to the original numbers. For example, if '243' is misread as '234', both numbers may be regarded as comparable in difficulty.
No answer is given in the expected place, but the correct answer is given elsewhere.	Where an understanding of the question has been shown, award the mark. In particular, where a word or number response is expected, a pupil may meet the requirement by annotating a graph or labelling a diagram elsewhere in the question.

Formal written methods

The following guidance, showing examples of formal written methods, is taken directly from the National Curriculum guidelines. These methods may not be used in all schools and any formal written method, which is the preferred method of the school and which gives the correct answer, should be acceptable.

Long multiplication

24 × 16 becomes

$$\begin{array}{r} {\scriptstyle 2}4 \\ \times\ 1\ 6 \\ \hline 2\ 4\ 0 \\ 1\ 4\ 4 \\ \hline 3\ 8\ 4 \end{array}$$

Answer: 384

124 × 26 becomes

$$\begin{array}{r} {\scriptstyle 1}\ {\scriptstyle 2}\ {\scriptstyle 4} \\ \times\ \ 2\ 6 \\ \hline 2\ 4\ 8\ 0 \\ \ \ 7\ 4\ 4 \\ \hline 3\ 2\ 2\ 4 \\ {\scriptstyle 1}\ {\scriptstyle 1} \end{array}$$

Answer: 3224

124 × 26 becomes

$$\begin{array}{r} {\scriptstyle 1}\ {\scriptstyle 2}\ {\scriptstyle 4} \\ \times\ \ 2\ 6 \\ \hline \ \ 7\ 4\ 4 \\ 2\ 4\ 8\ 0 \\ \hline 3\ 2\ 2\ 4 \\ {\scriptstyle 1}\ {\scriptstyle 1} \end{array}$$

Answer: 3224

Short division

98 ÷ 7 becomes

$$\begin{array}{r} 1\ 4 \\ 7\overline{)\,9\ {}^{2}8} \end{array}$$

Answer: 14

432 ÷ 5 becomes

$$\begin{array}{r} 8\ 6\ \text{r}2 \\ 5\overline{)\,4\ 3\ {}^{3}2} \end{array}$$

Answer: 86 remainder 2

496 ÷ 11 becomes

$$\begin{array}{r} 4\ 5\ \text{r}1 \\ 11\overline{)\,4\ 9\ {}^{5}6} \end{array}$$

Answer: $45\frac{1}{11}$

Long division

432 ÷ 15 becomes

$$\begin{array}{r} 2\ 8\ \text{r}12 \\ 15\overline{)\,4\ 3\ 2} \\ \underline{3\ 0\ 0} \\ 1\ 3\ 2 \\ \underline{1\ 2\ 0} \\ 1\ 2 \end{array}$$

Answer: 28 remainder 12

432 ÷ 15 becomes

$$\begin{array}{r} 2\ 8 \\ 15\overline{)\,4\ 3\ 2} \\ \underline{3\ 0\ 0} \quad 15 \times 20 \\ 1\ 3\ 2 \\ \underline{1\ 2\ 0} \quad 15 \times 8 \\ 1\ 2 \end{array}$$

$\frac{\cancel{12}}{\cancel{15}} = \frac{4}{5}$

Answer: $28\frac{4}{5}$

432 ÷ 15 becomes

$$\begin{array}{r} 2\ 8\ .\ 8 \\ 15\overline{)\,4\ 3\ 2\ .\ 0} \\ \underline{3\ 0} \\ 1\ 3\ 2 \\ \underline{1\ 2\ 0} \\ 1\ 2\ 0 \\ \underline{1\ 2\ 0} \\ 0 \end{array}$$

Answer: 28.8

National standard in maths

The mark that each child gets in the test paper will be known as the 'raw score' (for example, '62' in 62/110). The raw score will be converted to a scaled score and children achieving a scaled score of 100 or more will achieve the National Standard in that subject. These 'scaled scores' enable results to be reported consistently year-on-year.

The guidance in the table below shows the marks that children need to achieve to reach the National Standard. This should be treated as a guide only, as the number of marks may vary. You can also find up-to-date information about scaled scores on our website: www.scholastic.co.uk/nationaltests

Marks achieved	Standard
0–57	Has not met the national standard in mathematics for KS2
58–110	Has met the national standard in mathematics for KS2

Mark scheme Test A: Paper 1

Q	Answers	Marks
1	320	1
2	72	1
3	426	1
4	0.89	1
5	60,875	1
6	11,000	1
7	4	1
8	$\frac{3}{7}$	1
9	96	1
10	20	1
11	180	1
12	64	1
13	0.12	1
14	−5	1
15	10,000	1
16	10,755	1
17	2.8	1
18	0.6	1
19	669,000	1
20	2240 Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2
21	18	1
22	19	1
23	1084	1
24	5750	1
25	23.5 or 23 r8 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
26	$\frac{1}{18}$	1
27	32	1

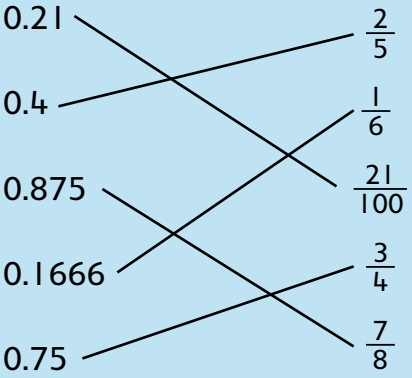
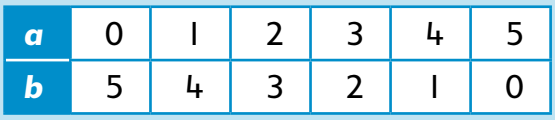
Q	Answers	Mark
28	279,086 Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2
29	7400	1
30	$1\frac{3}{8}$	1
31	$18\frac{1}{3}$	1
32	4.85	1
33	54	1
34	45.625 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
35	$\frac{1}{12}$	1
36	2,293,791	1
	Total	**40**

Mark scheme Test A: Paper 2

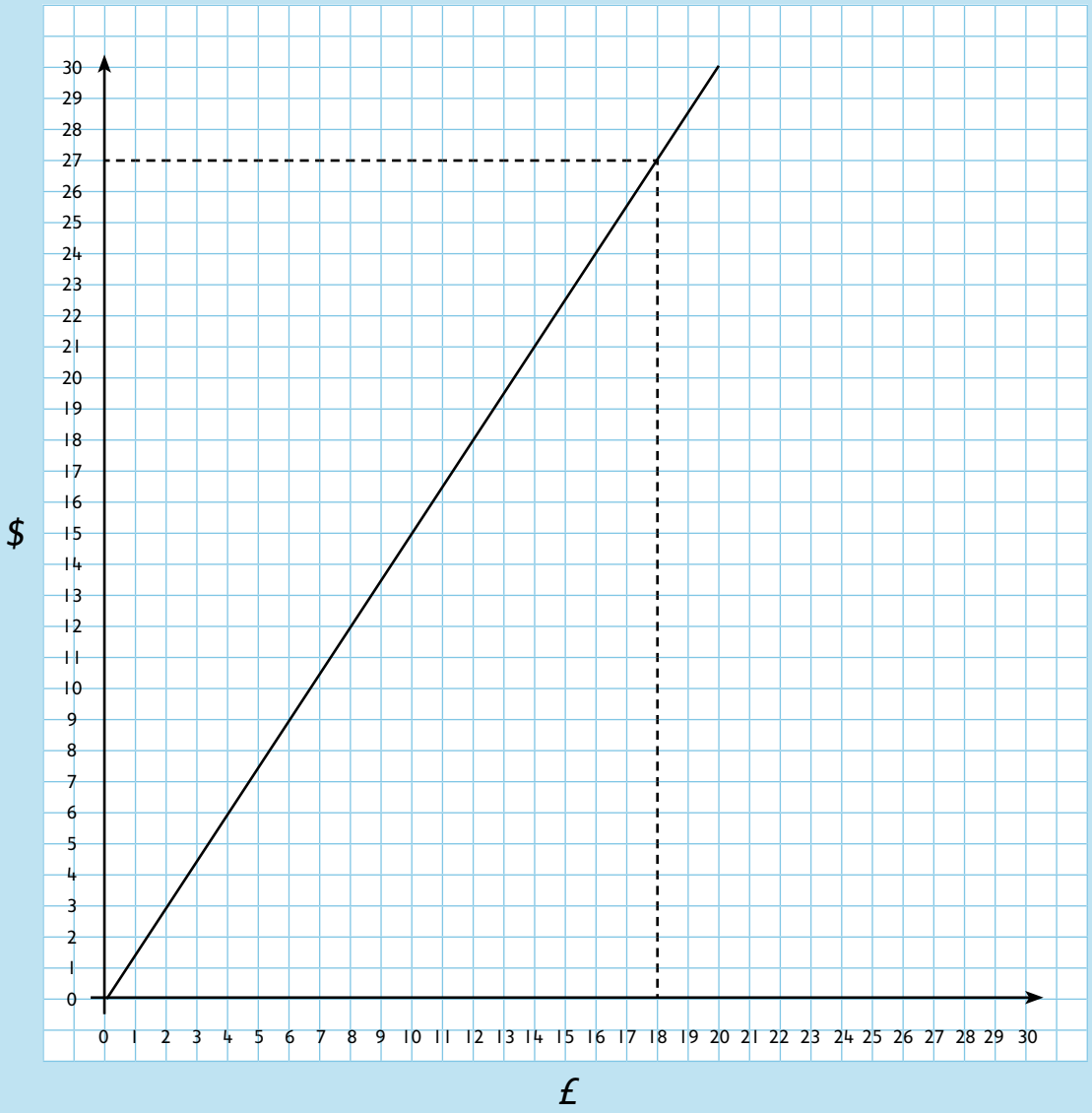
Q	Answers	Marks
1	$\frac{23}{100}$	1
2	56 16 more blackbirds than robins	1 1
3	$\begin{array}{r} 6\,\mathbf{7}\,5\,\mathbf{2} \\ +\,\mathbf{3}\,3\,\mathbf{0}\,0 \\ \hline 1\,0\,0\,5\,2 \end{array}$	1
4	Award 1 mark for a line drawn with a ruler, accurate to within 2mm of centre point and circumference. (Do not reward a mark for line drawn across the full width.) 4cm (Accept any answer between 4.4cm and 4.6cm.)	1 1
5	396	1
6	Enlarged square should be 9cm on each side. (Only allow 2mm variation for side lengths, and 2 degrees variation for angles.) 81cm^2 (Units must be given correctly.)	1 1
7	4425 hours (Accept answer without units, or as a negative number.) Uranus and Neptune	1 1
8	$\frac{3}{14}$	1
9	12,364 22,364 **32,364** **42,364** **52,364** 62,364	1
10	718,859 (Accept answer given in words or digits.) Award one mark for a correct written method but with one arithmetic error.	2
11	(Do not award marks for ambiguous answers.) rhombus parallelogram trapezium square Two pairs of parallel sides. Opposite sides of equal length. Opposite angles equal. Four identical sides. Four identical angles. Two pairs of parallel sides. All sides of identical length. Opposite angles equal. One pair of parallel sides. No sides of equal length.	1

Q	Answers	Marks
12	$\frac{5}{11}$ $\frac{7}{15}$ $\frac{1}{2}$ $\frac{5}{9}$ $\frac{4}{7}$	1
13	<table><tr><th>Number of windows</th><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><th>Cost (£)</th><td>21</td><td>25</td><td>29</td><td>33</td><td>37</td><td>41</td><td>45</td></tr></table>	1
14	Award mark only if evidence shows an understanding of the numbers being divisible by 2 (15,322 is even/ends in 2), 5 (13,575 ends in 5) and 3 or 9 (17,253 sum of individual digits).	1
15	26	1
16	8.237 tonnes 1.763 tonnes	1 1
17	$a = 5$, $b = 7$ or $a = 7$, $b = 5$ Do not award a mark if only one combination is given.	1
18	New shape should have the coordinates shown below. All vertices should be accurate to within 2mm. A'(–6, 1), B'(–3, 5), C'(–1, 1) If A'B'C' was reflected in the *x*-axis it would be flipped upside down and all its y co-ordinates would become negative.	1 1 1
19	22p	1
20	Wrong. (643 × 28 = 18,004) Award 1 mark for proof of using an inverse division with the correct method, either 18,104 ÷ 28 or 18,104 ÷ 643.	2
21	$\frac{7}{15}$ 4800	1 1
22	<table><tr><th>triangles</th><th>circles</th></tr><tr><td>1</td><td>6</td></tr><tr><td>2</td><td>10</td></tr><tr><td>3</td><td>14</td></tr><tr><td>4</td><td>18</td></tr><tr><td>5</td><td>22</td></tr></table> (1 mark for all correct) $c = 4t + 2$	1 1
23	£10,125 Award 1 mark for a correct method but with one arithmetic error.	2
	Total	**35**

Mark scheme Test A: Paper 3

Q	Answers	Marks
1	All sides equal. All sides equal. **Equilateral** Two sides equal. Two angles equal. **Isosceles** One angle equals 90°. **Right-angled** All sides different. All angles different. **Scalene**	1
2	1.3, 3.69, 0.571	1
3	35, 70, 105, **140**, **175**, **210**	1
4	cuboid	1
5	7500	1
6	38°C −3°C Do not award mark for 15°C.	1 1
7	127cm Award 1 mark for either: • the correct approach to converting units but with the wrong answer. or • the correct approach to multiplying a decimal by a whole number but with the wrong answer.	2
8		1
9	 (Number pairs may be presented in any order.)	1
10	8: eight million 4: forty thousand 3: three hundred	1
11	7cm	1
12	32 £3	2

Q	Answers	Marks
13	$a = 75°$, $b = 105°$ Rhombus. It has all sides the same length, opposite sides parallel, and opposite angles equal. Award 1 mark for the correct name and two correct facts.	1 2
14	XCIV	1
15	240 children	1
16	50,250 Award 2 marks for a correct answer AND evidence of breaking the larger number into parts, such as 1000 × 50 + 5 × 50. Award 1 mark for an incorrect answer but with a correct approach to solving the problem and only one arithmetic error.	2
17	They each have a medium drink and a biscuit. Award 1 mark for wrong answers but with working out how much each person spent (£3.04) and evidence of working out different combinations.	2
18	21.54cm	1

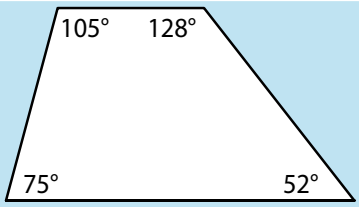
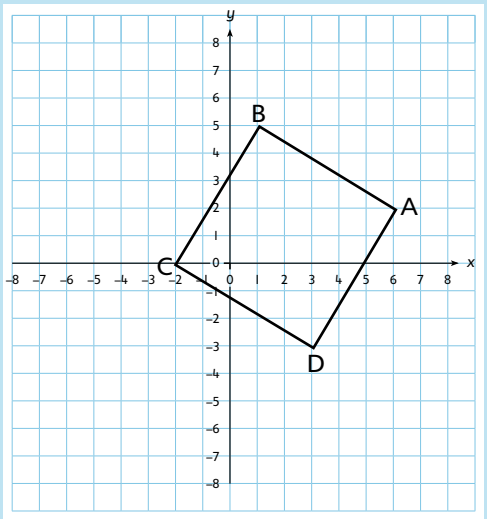
Q	Answers	Marks
19	 Award 1 mark for a straight line starting at the origin and going to the point (20, 30). The line should be accurate to within 2mm of each point. £18 = $27 Lines should be accurate to within 2mm.	1 1
20	24cm or 0.24m 100cm² or 0.01m²	1 1
21	9	1
22	90cm²	1
23	44 4	1 1
24	$\frac{1}{5}$ $\frac{1}{8}$	1 1
	Total	**35**

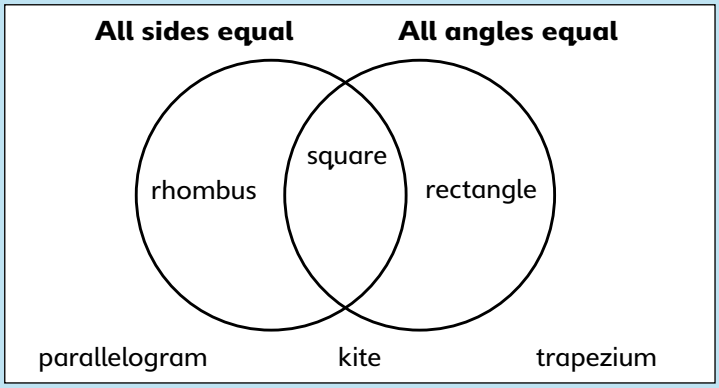
Mark scheme Test B: Paper 1

Q	Answers	Marks
1	25	1
2	77	1
3	50	1
4	41	1
5	20,000	1
6	11	1
7	$\frac{3}{5}$	1
8	4.68	1
9	−11	1
10	33,744	1
11	0.1	1
12	2.7	1
13	29,700	1
14	3600	1
15	80	1
16	7.8	1
17	$\frac{1}{4}$	1
18	6281	1
19	$\frac{1}{8}$	1
20	36	1
21	10,750	1
22	489,207	1
23	63	1
24	6.4	1
25	114 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
26	650,000	1
27	$\frac{11}{15}$	1

Q	Answers	Marks
28	216	1
29	28,826 Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2
30	75	1
31	$\frac{5}{6}$	1
32	150,710 Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2
33	$2\frac{4}{7}$	1
34	460 r8 or 460.666 or 460.667 or $460\frac{2}{3}$ Award 1 mark for a correct written method for short division but with one arithmetic error.	2
35	$7\frac{1}{5}$	1
36	4800	1
	Total	**40**

Mark scheme Test B: Paper 2

Q	Answers	Marks
1	$\frac{2}{9}$	1
2	0.8	1
3	5cm 65mm 2000mm 3.5m 400cm	1
4	80g	1
5	$\frac{3}{4}$, $\frac{2}{5}$, $\frac{1}{3}$	1
6	8,406,085 (Accept answer without commas, and with or without spaces between digits.)	1
7	224oz 454kg 35oz	1 1 1
8	8,447,000	1
9	1 in 4 are blue Accept '1 out of 4' or '$\frac{1}{4}$'. 1:2 Accept 1 to 2, but do not award mark for 3:6.	2
10	 Answer should show an understanding that the four angles of a quadrilateral (accept trapezium) add up to 360°.	2
11	In any order: 1 and 96, 2 and 48, 3 and 32, 4 and 24, 6 and 16, 8 and 12 5 and 13	1 1
12	 A square (2, 1)	1 1 1

Q	Answers	Marks
13	£55,175 Award 2 marks for working out: 675 × 45 = 30,375 400 × 62 = 24.800 but an error in addition of them. Award 1 mark for clear demonstration of the correct formal written method for long multiplication but with one arithmetic error.	3
14	 An equilateral triangle has three identical sides (and all equal angles), whereas an isosceles triangle has only two equal sides (and two equal angles). Award mark if the explanation only covers angles or only covers sides. Do not award marks if angles are defined for one shape, and sides for the other.	1 1
15	$y = 2x + 1$	1
16	140,000	1
17	36cm 48cm^2	1 1
18	<table><tr><td>***p***</td><td>1</td><td>3</td><td>5</td><td>7</td><td>9</td><td>11</td><td>13</td></tr><tr><td>***q***</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr></table> (Number pairs may be presented in any order.)	1
19	60 Award 1 mark for an incorrect answer but with a correct approach to solving the problem and only one arithmetic error.	2

Q	Answers	Marks
20		2

Vegetable	Angle	Percentage	People
Broccoli	90°	**25**	**100**
Carrots	144°	**40**	**160**
Peas	36°	**10**	**40**
Spinach	18°	**5**	**20**
Cabbage	72°	**20**	**80**
Total	**360°**	**100**	**400**

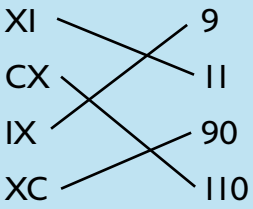
Award 1 mark if at least four rows are correct.

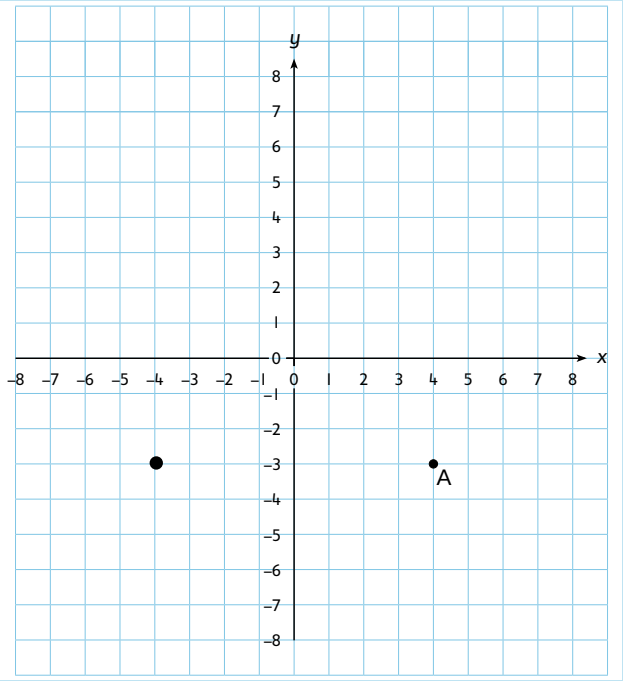
21	Adult £4.80, Child £2.50 Award 1 mark for working out the cost of one adult and one child. £9.80 − £17.10 = £7.30	2
	Total	**35**

Mark scheme Test B: Paper 3

<table>
<tr><th>Q</th><th>Answers</th><th>Marks</th></tr>
<tr><td>1</td><td>Line must be accurate to 2mm at each end.
Square and pentagon.
(All must be correct and accurate for 1 mark.)</td><td>1</td></tr>
<tr><td>2</td><td>0.015 0.051 0.105 0.150 0.501 0.510</td><td>1</td></tr>
<tr><td>3</td><td>1244 students</td><td>1</td></tr>
<tr><td>4</td><td><table><tr><th>Onions</th><th>Potatoes</th><th>Carrots</th></tr><tr><td>5</td><td>10</td><td>15</td></tr><tr><td>10</td><td>20</td><td>30</td></tr><tr><td>20</td><td>40</td><td>60</td></tr><tr><td>100</td><td>200</td><td>300</td></tr></table>1:3 (Do not award mark for 5:15.)
50%</td><td>1
1
1</td></tr>
<tr><td>5</td><td>$\frac{7}{12}$ $\frac{5}{8}$ $\frac{4}{6}$ $\frac{17}{24}$ $\frac{3}{4}$</td><td>1</td></tr>
<tr><td>6</td><td>5.5km

Award 1 mark for the correct method to find the mean (total divided by the number of days) but with an incorrect answer.</td><td>2</td></tr>
<tr><td>7</td><td>Answers must make clear that Jim has rounded to the nearest ten thousand, and not to the nearest thousand.
1,248,000</td><td>1
1</td></tr>
<tr><td>8</td><td>× 1000
÷ 10
× 10

Award 1 mark if two of the three are correct.</td><td>2</td></tr>
<tr><td>9</td><td> 
</td><td>1</td></tr>
</table>

Q	Answers	Marks
10	A' should be drawn at (–4, –3), accurate to within 2mm. 	1
11	12 30	1 1 1
12	32p	1
13	15km 30 minutes or $\frac{1}{2}$ hour	1 1
14	7	1
15	£13.68 Award 1 mark for the correct conversion of litres to gallons, even if final price calculation is incorrect.	2
16	–3	1
17	£28.75 £2.75 £46	1 1 1
18	acute: ***a*** = 60° obtuse: ***b*** = 120° reflex: ***c*** = 300°	1

s	1	2	3	10	15	20
c	4	**6**	**8**	**22**	**32**	**42**

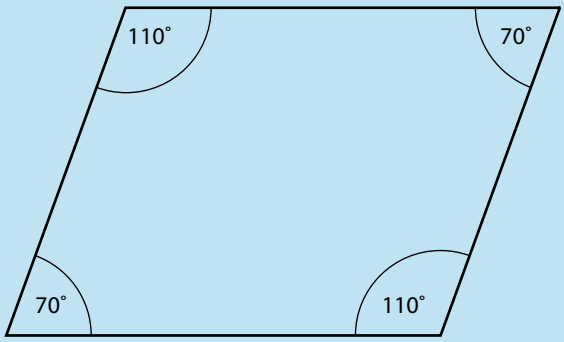
Q	Answers	Marks
19	360 children Award 1 mark for demonstration of an appropriate method for solving the problem.	2
20	(Award marks if corners accurate to within 2mm.) E = (1, 1), F = (4, 7), G = (10, 4) Award marks if G and F are put the other way around	1 1
21	$60m^3$ Award 1 mark for evidence of correct method for calculating volume (length × width × height).	2
	Total	**35**

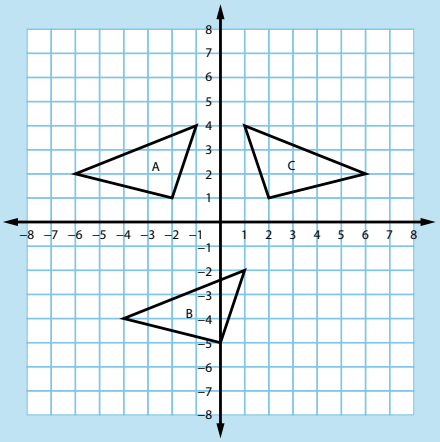
Mark scheme Test C: Paper 1

Q	Answers	Marks
1	96	1
2	28	1
3	900	1
4	−7	1
5	64	1
6	$\frac{4}{9}$	1
7	11,111	1
8	70	1
9	0.28	1
10	12	1
11	750	1
12	0.5	1
13	0.61	1
14	99	1
15	240	1
16	50	1
17	3420	1
18	9	1
19	71,200	1
20	$\frac{27}{8}$ or $3\frac{3}{8}$	1
21	1.67	1
22	108,445	2
23	12	1
24	2,150,000	1
25	23	1
26	400	1
27	6	1
28	$\frac{23}{12}$ or $1\frac{11}{12}$	1
29	231 r2 (Accept 231 $\frac{2}{16}$ or 231.125)	2
30	0.7	1
31	3,184,191	1

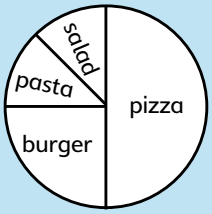
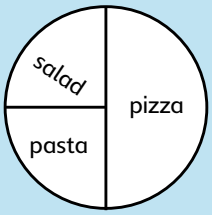
Q	Answers	Marks
32	$\frac{1}{12}$	1
33	161,512	2
34	96	1
35	227.7	1
36	204 r6	2
	Total	**40**

Mark scheme Test C: Paper 2

Q	Answers	Marks
1	1.13	1
2	$\begin{array}{r} 9\,\mathbf{7}\,6 \\ +\quad 3\,5\,\mathbf{2} \\ \hline 1\,\mathbf{3}\,2\,8 \end{array}$	1
3	DCXIII (it should be DCCXIII)	1
4	$\frac{4}{32} = \frac{1}{8}$ $\frac{3}{15} = \frac{1}{5}$ $\frac{12}{16} = \frac{3}{4}$ $\frac{12}{15}$	1 1
5	Square-based pyramid  a = 110° b = 70° c = 70°	1 1
6	−13°C	1
7	$\begin{array}{r} \quad 2\,2 \\ \mathbf{2}\,4\overline{)5\,2\,\mathbf{8}} \end{array}$	1
8	**742**, 3742, 6742, 9742, **12,742**	1
9	135,000 people	1
10	$\frac{3}{8} \div \frac{1}{2} = \frac{3}{4}$	1
11	**Person** 1 2 3 4 5 6 **Mean average** **Books** 10 7 4 2 8 5 6 **DVDs** 1 3 2 5 0 4 2.5 **Kilometres** 2 5 10 **Miles** 1.2 or 1.3 3.1 6.2	1 1

Q	Answers	Marks
12	<table><tr><th>Fraction</th><th>Equivalent fraction</th><th>Decimal</th><th>Percentage</th></tr><tr><td>$\frac{3}{6}$</td><td>$\frac{1}{2}$</td><td>0.5</td><td>50%</td></tr><tr><td>$\frac{2}{8}$</td><td>$\frac{1}{4}$</td><td>0.25</td><td>25%</td></tr><tr><td>$\frac{9}{15}$</td><td>$\frac{3}{5}$</td><td>0.6</td><td>60%</td></tr></table>	1
13	 Only award one mark for each triangle if plotted coordinates are accurate to 1mm.	2
14	$s = 4 \quad t = 6$	1
15	750 grams of flour 48 metres	1 1
16	5 cups 10ml	1 1
17	54m 128.4m^2	1 1
18	23	1
19	2958 people	2
20	44°	2
21	£975 £49,900	1 1
22	£210 profit	2
23	288cm^2 Award 1 mark for clear evidence of correct procedure but with an incorrect answer.	2
	Total	**35**

Mark scheme Test C: Paper 3

Q	Answers	Marks
1	Square Hexagon Parallelogram	1
2	1.3kg 2.4l £3.57 0.65km	1
3	3 hours 6 minutes 44 seconds	1
4	6.725 6.734	1
5	Any five-digit number written in words (spelled correctly) without using the same numeral twice. e.g. twenty-five thousand, four hundred and sixty-seven The same five-digit number rounded to the nearest thousand, written in numerals. e.g. 25,000	1 1
6	  Children's lines may not be in these positions. Line should all pass through or stop at the centre point. Angles should be accurate to 5 degrees. (Children are not obliged to use a protractor).	1 1
7	Workings which prove that 1.5 × 2.3 = 3.5 (1.5 × 2.3 = 3.45, which will be rounded up to 3.5)	1
8	See table below	1

Improper fraction	Mixed number	Decimal
$\frac{3}{2}$	$1\frac{1}{2}$	1.5
$\frac{5}{2}$	$2\frac{1}{2}$	**2.5**
$\frac{5}{4}$	$\mathbf{1\frac{1}{4}}$	**1.25**
$\frac{37}{10}$	$\mathbf{3\frac{7}{10}}$	3.7

Q	Answers	Marks
9	<table><tr><th>Original price</th><th>New price</th></tr><tr><td>£6999</td><td>£5499</td></tr><tr><td>£13,699</td><td>£12,199</td></tr><tr><td>£28,350</td><td>£26,850</td></tr><tr><td>£124,499</td><td>£122,999</td></tr></table>	1
10	36 61	1 1
11	1632 × 56 9792 81600 91392	1
12	The triangles used to make the square are right-angled triangles as they have 90° angles at the centre (4 right-angles make 360°). The triangles used to make the hexagon are equilateral triangles; the six angles at the centre are 60° each. The edge angles of a hexagon are 120°, so each triangle must be 60°. Award one mark for mention of right-angled triangles (isosceles is also acceptable) and equilateral triangles. Two marks only for explanation of angles.	2
13	186 miles 1,610,000mm	1 1
14	<table><tr><td>x</td><td>1</td><td>2</td><td>4</td><td>11</td><td>22</td><td>44</td></tr><tr><td>y</td><td>44</td><td>22</td><td>11</td><td>4</td><td>2</td><td>1</td></tr></table> Only award mark if all values are correct and complete. 88	1 1
15	12 minutes 2.5km	1 1
16	154 sofas Award 1 mark for evidence of a correct procedure to using ratios for calculating quantities, but with an incorrect answer.	2

Q	Answers	Marks
17	D (8,1) Technical: Please reproduce coordinate grid with completed rectangle drawn. Final point D should be at (8,1).	1
18	13 dots $n = 2t + 1$	1 1
19	1,964,845 people	1
20	105 boys $\frac{26}{75}$ (accept $\frac{52}{150}$ and $\frac{104}{300}$) 104 girls	1 1 1
21	32,000ml 14,400cm^3	1 1
22	52 fun figures	2
	Total	**35**