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**YEAR 5**

**MATHEMATICS**

**Termly Assessment Tests**

**Guidance and mark schemes**

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# Guidance and mark schemes for mathematics: Year 5

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## About this pack

This pack provides you with termly assessment tests to help support children with end-of-year tests and to assess which skills need further development. 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 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.

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)
Fractions	recognise, find, write, name and count fractions
	equivalent fractions
	compare and order fractions
	add/subtract fractions
	multiply/divide fractions
	fractions/decimals 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
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
Geometry – position and direction	patterns
	describe position, direction and movement
	coordinates
Statistics	interpret and represent data
	solve problems involving data

## 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: <ul style="list-style-type: none"><li>● award the mark if the incorrect answer is due to a transcription error</li><li>● award the mark if there is extra unnecessary workings which do not contradict work already done</li><li>● do not award the mark if there is extra unnecessary workings which do contradict work already done.</li></ul>
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
<p>There appears to be a misread of numbers affecting the working.</p>	<p>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.</p>
<p>No answer is given in the expected place, but the correct answer is given elsewhere.</p>	<p>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.</p>

## 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

$24 \times 16$  becomes

$$\begin{array}{r} \phantom{2}^2 \phantom{4} \\ 24 \\ \times 16 \\ \hline 240 \\ 144 \\ \hline 384 \end{array}$$

Answer: 384

$124 \times 26$  becomes

$$\begin{array}{r} \phantom{1}^1 \phantom{2}^2 \phantom{4} \\ 124 \\ \times \phantom{1} 26 \\ \hline 2480 \\ 744 \phantom{0} \\ \hline 3224 \end{array}$$

Answer: 3224

$124 \times 26$  becomes

$$\begin{array}{r} \phantom{1}^1 \phantom{2}^2 \phantom{4} \\ 124 \\ \times \phantom{1} 26 \\ \hline 744 \\ 2480 \\ \hline 3224 \end{array}$$

Answer: 3224

### Short division

$98 \div 7$  becomes

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \end{array}$$

Answer: 14

$432 \div 5$  becomes

$$\begin{array}{r} 86 \text{ r}2 \\ 5 \overline{) 432} \end{array}$$

Answer: 86 remainder 2

$496 \div 11$  becomes

$$\begin{array}{r} 45 \text{ r}1 \\ 11 \overline{) 496} \end{array}$$

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

### Long division

$432 \div 15$  becomes

$$\begin{array}{r} 28 \text{ r}12 \\ 15 \overline{) 432} \\ \underline{300} \\ 132 \\ \underline{120} \\ 12 \end{array}$$

Answer: 28 remainder 12

$432 \div 15$  becomes

$$\begin{array}{r} 28 \\ 15 \overline{) 432} \\ \underline{300} \quad 15 \times 20 \\ \underline{132} \\ \underline{120} \quad 15 \times 8 \\ 12 \end{array}$$

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

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

$432 \div 15$  becomes

$$\begin{array}{r} 28.8 \\ 15 \overline{) 432.0} \\ \underline{300} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$$

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](http://www.scholastic.co.uk/nationaltests)

Marks achieved	Standard
0–56	Has not met the national standard in mathematics for Year 5
57–110	Has met the national standard in mathematics for Year 5

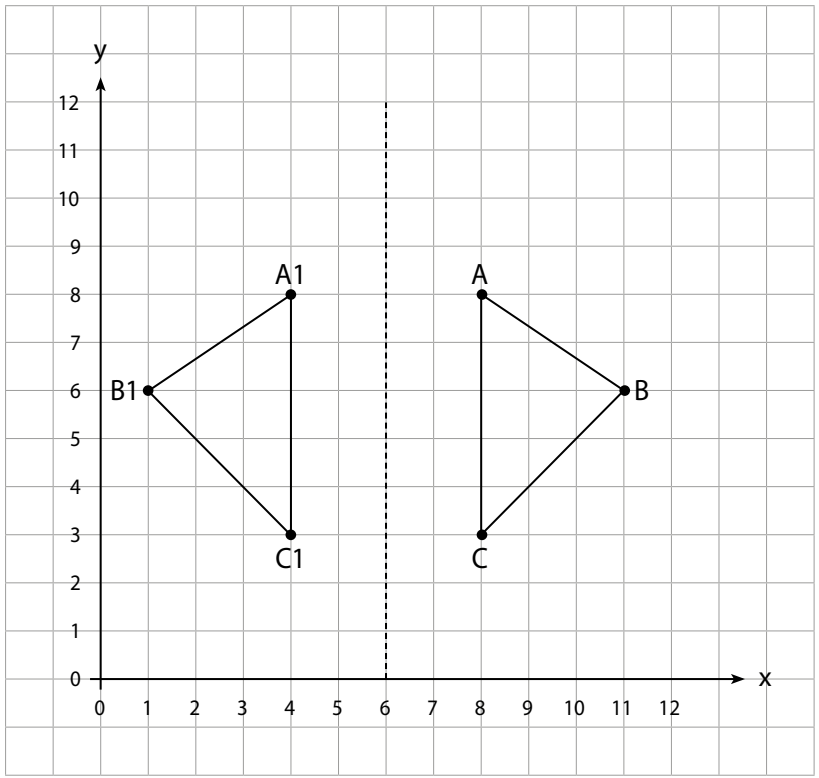
## Mark scheme Test A: Paper 1

Q	Answers	Mark
1	108	1
2	20	1
3	89	1
4	0.2	1
5	44	1
6	870	1
7	9	1
8	104	1
9	96	1
10	$\frac{1}{3}$	1
11	0.9	1
12	25	1
13	30	1
14	564	1
15	$\frac{2}{5}$	1
16	1800	1
17	31	1
18	1008	1
19	855	1
20	23	1
21	20,412	1
22	6.5	1
23	$\frac{3}{4}$	1
24	0.43	1
25	3.2	1
26	124 r2  Award 1 mark for a correct written method for short division but with one arithmetic error.	2
27	6	1
28	7266  Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2

Q	Answers	Mark
29	71,632	1
30	1050	1
31	8	1
32	16,380 Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2
33	41	1
34	535 r3 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
35	634.62	1
36	$\frac{1}{2}$ or $\frac{6}{12}$ or $\frac{3}{6}$	1
<b>Total</b>		<b>40</b>

## Mark scheme Test A: Paper 2

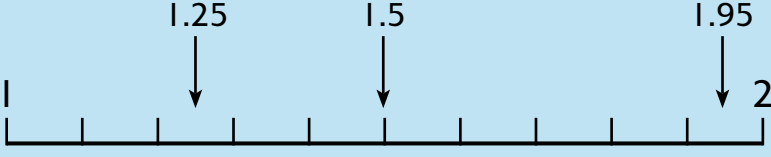
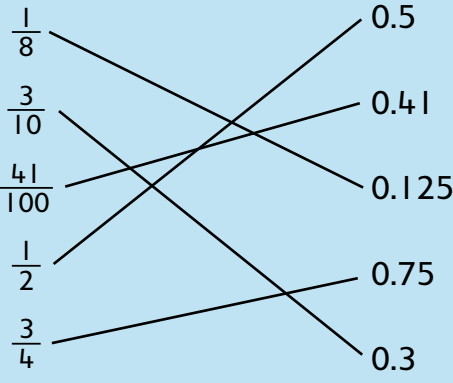
Q	Answers	Marks															
1	4 beads should be circled.	1															
2	$\begin{array}{r} 452 \\ - 120 \\ \hline 332 \end{array}$	1															
3	The thermometer should be marked at $-5^{\circ}\text{C}$ (Accept answers that are close, but not if they are ambiguous.)	1															
4	1715	1															
5	840,000	1															
6	3 13 10	1															
7	943,506, 944,506, <b>945,506</b> , <b>946,506</b> , 947,506	1															
8	CXXVI	1															
9	100,000cm (one hundred thousand)  Award 1 mark for correct knowledge of unit conversions. 1m = 100cm and 1km = 1000m	2															
10	5440  Award 1 mark for a correct written method but with one arithmetic error.	2															
11	<p>Irregular triangle</p> <p>Regular quadrilateral</p> <p>Irregular quadrilateral</p> <p>Regular hexagon</p>	1															
12	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th>Fraction</th> <th>Decimal</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td><math>\frac{1}{10}</math></td> <td><b>0.1</b></td> <td>10%</td> </tr> <tr> <td><math>\frac{1}{2}</math></td> <td>0.5</td> <td><b>50%</b></td> </tr> <tr> <td><math>\frac{3}{4}</math></td> <td><b>0.75</b></td> <td><b>75%</b></td> </tr> <tr> <td><math>\frac{1}{1}</math></td> <td>1</td> <td>100%</td> </tr> </tbody> </table>	Fraction	Decimal	Percentage	$\frac{1}{10}$	<b>0.1</b>	10%	$\frac{1}{2}$	0.5	<b>50%</b>	$\frac{3}{4}$	<b>0.75</b>	<b>75%</b>	$\frac{1}{1}$	1	100%	1
Fraction	Decimal	Percentage															
$\frac{1}{10}$	<b>0.1</b>	10%															
$\frac{1}{2}$	0.5	<b>50%</b>															
$\frac{3}{4}$	<b>0.75</b>	<b>75%</b>															
$\frac{1}{1}$	1	100%															

Q	Answers	Marks
<b>13</b>	Yes  Award 1 mark for an incorrect answer but with a correct approach to solving the problem and only one arithmetic error.	1
<b>14</b>	28 15 18	1 1 1
<b>15</b>	1 and 24, 2 and 12, 3 and 8, 4 and 6	1
<b>16</b>	2.15pm or 14:15 Accept 14:15pm	1 1
<b>17</b>	Accept £11,000 or £12,000 or £13,000 £4680  Award 1 mark if the answer is incorrect, but the approach to calculating the answer is appropriate, with a maximum of one arithmetic error in the working.	1 2
<b>18</b>	 <p>A reflected: (4, 8), B reflected: (1, 6), C reflected: (4, 3).            Final part must show an understanding that only the x-coordinates change.            Accept <i>The y-coordinates stay the same.</i></p>	1  1
<b>19</b>	The bar for bus travellers should be 5 units high. The bar should be drawn accurately and to the same width as other bars. Twice as many children <i>walk</i> to school than travel by <i>car</i> .	1  1

Q	Answers	Marks
20	$\begin{array}{r} 1\ 9\ 3\ 4\ 6 \\ -\ 1\ 2\ 8\ 5\ 7 \\ \hline 6\ 4\ 8\ 9 \end{array}$ or $\begin{array}{r} 1\ 9\ 3\ 4\ 6 \\ -\ 6\ 4\ 8\ 9 \\ \hline 1\ 2\ 8\ 5\ 7 \end{array}$	1
21	£6.75  Award 1 mark for correct procedure but incorrect answer. Cost = $75p + 50 \times (8p + 2p) = £5.75$ Sales = $50 \times 25p = £12.50$ Profit = sales – cost = incorrect answer	2
22	$\frac{45}{180}$	1
23	£359  Award 1 mark for a correct written method for short division but with with one arithmetic error.	2
<b>Total</b>		<b>35</b>



## Mark scheme Test A: Paper 3

Q	Answers	Marks
1	Award 1 mark only for all three shapes correctly showing a line of symmetry. The triangle is only symmetrical about a horizontal line.	1
2	 <p>Do not award marks for uncertain or ambiguous lines. The line in the answer booklet is 10cm long. Positions on the line should be accurate within 1mm.</p>	1
3	25, 50, 75, <b>100</b> , <b>125</b> , <b>150</b>	1
4	Yes ( $2480 \times 11 = 27,280$ )	1
5	17°C Do not accept -17.	1
6		1
7	£93.60  Award 1 mark for demonstration of a correct formal method for long multiplication but incorrect answer. 32p per book	2     1
8	Four hundred and sixty-three thousand, nine hundred and one. 704,020	1  1
9	Check that the bar chart has been drawn correctly.  Award one mark if: <ul style="list-style-type: none"> <li>● the bars are all drawn to the correct height</li> <li>● the bars are of all the same width.</li> </ul> <p><math>\frac{1}{6}</math> of the class have no pet</p>	2          1

Q	Answers	Marks
10	$\frac{1}{12}$  Award one mark for correct method to calculate common denominator, with a denominator of 12 found but an incorrect answer.	2
11	279 children	1
12	0.015; 0.051; 0.105; 0.150; 0.501; 0.510	1
13	$45 \div 9 + 53 - 32 = 26$	1
14	270° Reflex angle	1 1
15	LXVII	1
16	£2.50  Award 1 mark for correct approach but wrong answer. Popcorn: £20 – £2 change – ticket prices	2
17	121,929	1
18	3 grapes	1
19	Perimeter = 19m Area = 13.5m <sup>2</sup>  Award 1 mark if the perimeter is correct and the calculation of a single table area is correct. Otherwise award no marks.	2
20	£106,000	1
21	20:00 (accept 8pm, do not accept 9pm or 10pm) 7°C 2.5 hours (accept $2\frac{1}{2}$ hours or 150 minutes)	1 1 1
22	552 people  Award 1 mark for $2700 \div 2 = 1380$ Award 2 marks for $1380 \div 5 = 276$ ; $276 \times 3 = 828$	3
<b>Total</b>		<b>35</b>

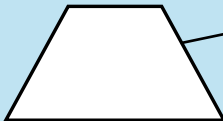
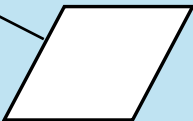
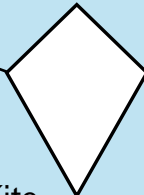
## Mark scheme Test B: Paper 1

Q	Answers	Marks
1	6.3	1
2	24	1
3	41	1
4	$\frac{3}{4}$	1
5	1400	1
6	5	1
7	573	1
8	1600	1
9	24	1
10	100	1
11	$\frac{11}{12}$	1
12	12.5	1
13	896,248	1
14	0.52	1
15	207	1
16	1.1	1
17	13	1
18	165	1
19	3.45	1
20	28	1
21	40,419	1
22	1400	1
23	484	1
24	0.35	1
25	16,133	1
26	40	1
27	2349  Award 1 mark for a correct written method for short division but with one arithmetic error.	2
28	11,638	1

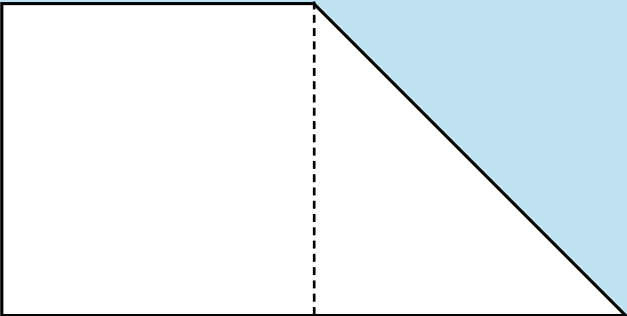
Q	Answers	Marks
29	4611 Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2
30	$\frac{1}{8}$	1
31	51	1
32	10,710 Award 1 mark for a correct written method for long multiplication but with one arithmetic error.	2
33	3.91	1
34	$4\frac{1}{2}$ or 4.5	1
35	804 r1 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
36	$\frac{9}{12}$ or $\frac{3}{4}$	1
<b>Total</b>		<b>40</b>

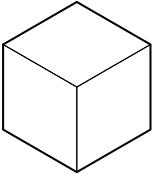
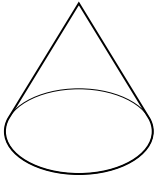
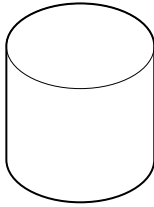
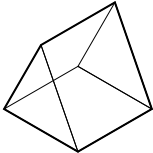
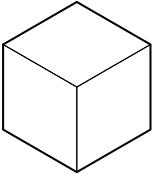
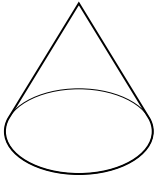
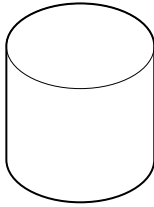
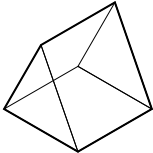
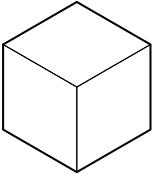
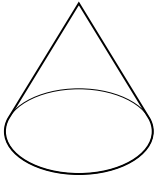
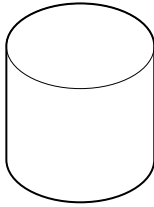
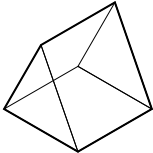
## Mark scheme Test B: Paper 2

Q	Answers	Marks
<b>1</b>	$\frac{1}{8}$	1
<b>2</b>	24	1
<b>3</b>	Ensure line is 53mm. It should be drawn with a ruler and accurate to within 1mm.	1
<b>4</b>	12,364, 22,364, <b>32,364</b> , <b>42,364</b> , <b>52,364</b> , 62,364	1
<b>5</b>	Four hundred and thirty-two thousand, five hundred and seventy-eight.	1
<b>6</b>	25.4cm	1
<b>7</b>	10	1
<b>8</b>	945 9759 89,495 320,780 500,000	1
<b>9</b>	120,000 880,000	1
<b>10</b>	760ml  Award 1 mark for a correct written method but with one arithmetic error.	2
<b>11</b>	90°, right angle 165°, obtuse angle (Allow inaccuracies within 1°)  Award one mark for each angle measured and named correctly. Award one mark if both angles are measured correctly but named incorrectly, or vice versa.	2
<b>12</b>	456 children 24 spare places  If the second answer is incorrect, award 1 mark for a method which shows a clear understanding of the appropriate order of procedures. For example, calculate year group $4 \times 30 = 120$ calculate school capacity $4 \times 120 = 480$ subtract current number $480 - 456 =$ incorrect answer	1 2
<b>13</b>	2400 books	1
<b>14</b>	15 children  Award 1 mark for a correct written method but with one arithmetic error.	2

Q	Answers	Marks
15	$\frac{1}{4}$ pizza each. Award 1 mark for correctly identifying $2\frac{1}{2} = \frac{1}{2}$ children.	2
16	£855 Award 1 mark for correct formal written method for short division but with one arithmetic error. £340	2 1
17	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: 25%; text-align: center;"> <p>I have all four sides equal, and opposite angles equal.</p> </div> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: 25%; text-align: center;"> <p>I have two pairs of equal sides. They are adjacent to each other.</p> </div> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: 25%; text-align: center;"> <p>I only have one pair of parallel sides.</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">  Trapezium         </div> <div style="text-align: center;">  Rhombus         </div> <div style="text-align: center;">  Kite         </div> </div>	2
18	$6\frac{11}{12}$	1
19	Side length of square = 6cm Award 2 marks for the correct calculation but an incorrect arithmetic error. $1 \times 5 = 5 + 31 = 36\text{cm}^2 = \text{total area}$ area = $a \times b$ for square = $a \times a$ $a \times a = \text{incorrect answer}$ Award 1 mark for working out the correct total area and attempting to work out the perimeter.	3
20	8784 hours Award one mark for a correct written method for long multiplication but with one arithmetic error.	2
21	£1.49 £99.60	1 1
22	The car is not moving; it has stopped.	1
<b>Total</b>		<b>35</b>

## Mark scheme Test B: Paper 3

Q	Answers	Marks												
<b>1</b>	 <p>(Line should be accurate within 1 mm.)</p>	1												
<b>2</b>	1057    1075    1507    1570    1705    1750	1												
<b>3</b>	$\begin{array}{r} 638 \\ + 309 \\ \hline 947 \end{array}$	1												
<b>4</b>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th style="width: 33%;">Decimal</th> <th style="width: 33%;">Rounded to the nearest whole</th> <th style="width: 33%;">Rounded to one decimal place</th> </tr> </thead> <tbody> <tr> <td>0.83</td> <td><b>1</b></td> <td><b>0.8</b></td> </tr> <tr> <td>6.45</td> <td><b>6</b></td> <td><b>6.5</b></td> </tr> <tr> <td>13.50</td> <td><b>14</b></td> <td><b>13.5</b></td> </tr> </tbody> </table> <p>Award 1 mark for at least four correct answers.</p>	Decimal	Rounded to the nearest whole	Rounded to one decimal place	0.83	<b>1</b>	<b>0.8</b>	6.45	<b>6</b>	<b>6.5</b>	13.50	<b>14</b>	<b>13.5</b>	2
Decimal	Rounded to the nearest whole	Rounded to one decimal place												
0.83	<b>1</b>	<b>0.8</b>												
6.45	<b>6</b>	<b>6.5</b>												
13.50	<b>14</b>	<b>13.5</b>												
<b>5</b>	$\frac{1}{2} = \frac{5}{10}$ , $\frac{1}{4} < \frac{3}{8}$ , $\frac{2}{3} > \frac{5}{9}$	1												
<b>6</b>	4.83km	1												
<b>7</b>	Marks on thermometer should be accurate to within 1 mm on the scale provided, Moscow at $-4^{\circ}\text{C}$ and London at $+7^{\circ}\text{C}$ . 11 $^{\circ}\text{C}$	1												
<b>8</b>	575 star jumps  Award 1 mark for a correct written method but with one arithmetic error.  £6.60	2												
<b>9</b>	2015	1												
<b>10</b>	200g	1												
<b>11</b>	Accept 3 or three	1												

Q	Answers	Marks																									
12	Triangle 1: A(3, 7), B(5, 6), C(6, 9) Triangle 2: D(3, 3), E(5, 4), F(6, 1) (Do not award mark if any coordinates are incorrect.)	1																									
	Horizontal line at $y = 5$ (Do not award marks for ambiguous lines or more than one line.)	1																									
13	Ten past six Accept 6:10am, 6:10pm or 6:10	1																									
14	<table border="1"> <thead> <tr> <th>Shape</th> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Name</th> <td><b>cube</b></td> <td><b>cone</b></td> <td><b>cylinder</b></td> <td><b>triangular prism</b></td> </tr> <tr> <th>Faces</th> <td>6</td> <td>2</td> <td>3</td> <td>5</td> </tr> <tr> <th>Edges</th> <td>12</td> <td>1</td> <td>2</td> <td>9</td> </tr> <tr> <th>Vertices</th> <td>8</td> <td>0</td> <td>0</td> <td>6</td> </tr> </thead> </table>	Shape					Name	<b>cube</b>	<b>cone</b>	<b>cylinder</b>	<b>triangular prism</b>	Faces	6	2	3	5	Edges	12	1	2	9	Vertices	8	0	0	6	3
	Shape																										
	Name	<b>cube</b>	<b>cone</b>	<b>cylinder</b>	<b>triangular prism</b>																						
	Faces	6	2	3	5																						
	Edges	12	1	2	9																						
	Vertices	8	0	0	6																						
Award 2 marks if all shapes are named correctly and three of the shapes have all properties correct.																											
Award 1 mark if all shapes are named correctly but other information is incorrect.																											
15	The number 10 bus at 15:12. (Do not accept just the bus number.)	1																									
16	97	1																									
17	4	1																									
	3	1																									
18	Graph should show all points accurately marked with a small cross, with individual points connected by straight lines.	1																									
	Accept any estimated height between 17cm and 20cm. The graph does not have to be marked to show this, but mark as correct if it is and the answer box is blank.	1																									
19	10 lengths  Award 1 mark for working out the distance. $30 \times 25 = 750 - 100 = 250$	2																									



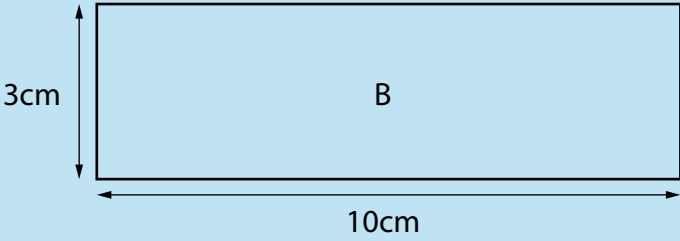
Q	Answers	Marks
20	546 miles  Award 1 mark for a correct addition of the four distances shown (1954 miles)	2
21	$60,000 + 70,000 + 50,000 = 180,000$  Award 1 mark for all numbers rounded correctly. Award 1 mark for a correct addition of rounded numbers.	2
22	60%	1
23	166,273	1
<b>Total</b>		<b>35</b>

## Mark scheme Test C: Paper I

Q	Answers	Marks
1	85	1
2	35	1
3	8	1
4	3200	1
5	36	1
6	0.6	1
7	42	1
8	351	1
9	210	1
10	135	1
11	2.5	1
12	32	1
13	3500	1
14	1.5	1
15	6	1
16	152	1
17	3.9	1
18	$\frac{5}{6}$ Accept equivalent fraction eg $\frac{10}{12}$	1
19	18,873	1
20	405	1
21	0.26	1
22	46,952	1
23	125	1
24	170	1
25	275	1
26	11,936	1
27	$\frac{3}{8}$	1
28	1242 Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method.	2
29	0.82	1

Q	Answers	Marks
30	1842  Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method.	2
31	0.09	1
32	135	1
33	4900	1
34	22,446  Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method.	2
35	55	1
36	321 r1  Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method. Also accept $321\text{ r}\frac{1}{8}$ or 321.125	2
<b>Total</b>		<b>40</b>

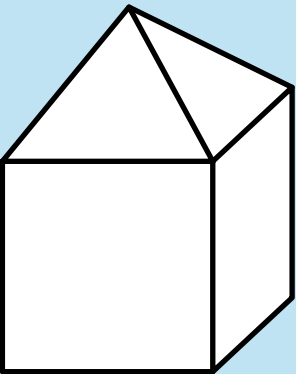
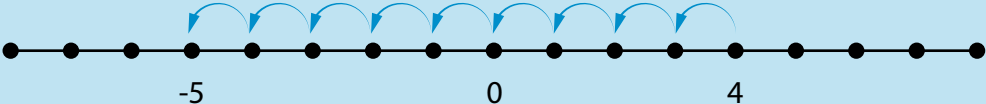
## Mark scheme Test C: Paper 2

Q	Answers	Marks												
<b>1</b>	<p>Thirty-six thousand, four hundred and seventy-eight Award mark only if spelling is correct.</p> <p>36,000</p>	  												
<b>2</b>	90,000													
<b>3</b>	$\frac{2}{12} \quad \frac{1}{4} \quad \frac{1}{2} \quad \frac{5}{8} \quad \frac{3}{4}$  $\frac{1}{2} = \frac{5}{10}, \frac{2}{3} = \frac{6}{9}, \frac{3}{10} = \frac{30}{100}$  $3\frac{3}{5}$	     												
<b>4</b>	$\begin{array}{r} 2464 \\ + 5376 \\ \hline 7840 \end{array}$													
<b>5</b>	$\frac{1}{15}$  Accept $\frac{2}{30}$													
<b>6</b>	<p>Capacity measured with cubes = 64ml</p> <p>Capacity measured with water = 65ml</p> <p>Answer should show understanding that the water method is more accurate as the whole container is filled; and/or that the cube method will be inaccurate due to air gaps, poor arrangement, etc.</p>	     												
<b>7</b>	<div style="text-align: center;">  <p style="margin-top: 10px;">Because the sides of a rectangle are not all an equal length.</p> </div>	  												
<b>8</b>	<p><math>0.36 = \frac{36}{100}</math> and <math>\frac{7}{20} = \frac{35}{100}</math>, so Tina is correct.</p> <p><math>\frac{71}{100}</math> or 0.71</p>	  												
<b>9</b>	12,805													
<b>10</b>	<table border="1" style="width: 100%; border-collapse: collapse; margin: 10px auto;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th colspan="4">Distance from Jill's house to the centre of town</th> </tr> <tr style="background-color: #0070C0; color: white;"> <th>In km</th> <th>In m</th> <th>In cm</th> <th>In mm</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2.746km</td> <td style="text-align: center;">2746m</td> <td style="text-align: center;">274,600cm</td> <td style="text-align: center;">2,746,000mm</td> </tr> </tbody> </table>	Distance from Jill's house to the centre of town				In km	In m	In cm	In mm	2.746km	2746m	274,600cm	2,746,000mm	
Distance from Jill's house to the centre of town														
In km	In m	In cm	In mm											
2.746km	2746m	274,600cm	2,746,000mm											

Q	Answers	Marks
11	0.09 and 0.66  7 tenths , 4 hundredths , 8 thousandths  0.75 , 0.7  In all cases only award one mark if all answers to that part are correct.	1  1  1
12	16,710 miles  Award one mark for correct procedure and written method but with an incorrect answer.	2
13	4.8kg  Accept 4.800kg	1
14	<p>Multiple of 2 4, 8, 12, 14</p> <p>Factor of 30 3, 5, 15</p> <p>Intersection: 6, 10</p> <p>Other elements: 7, 9, 11, 13</p>	2
15	437,452 children	1
16	<p>Edges and vertices should be accurate to within 1mm.</p> <p>Also accept <math>7506/6 = 1251</math> as a correct answer</p>	1
17	$\begin{array}{r} 1256 \\ 6 \overline{)7536} \end{array}$	1
18	99 girls	1

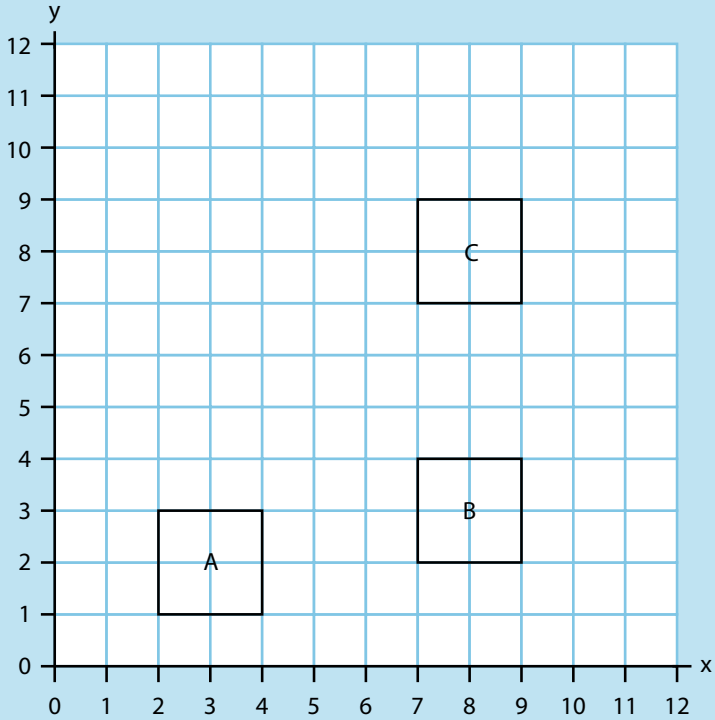
Q	Answers	Marks
19	Accept any of 08:25am; 8.25am; twenty-five past eight	1
20	£9350  Award one mark for correct procedure and written method but with an incorrect answer.	2
21	5 adults  Award 1 mark for clear evidence of a suitable approach to solving the problem, including correct written methods, but with an incorrect answer.	3
<b>Total</b>		<b>35</b>

## Mark scheme Test C: Paper 3

Q	Answers	Marks															
1	CL	1															
2	<div style="text-align: center;">  </div> <p style="text-align: center; margin-top: 10px;">Lines must be accurate to within a millimetre to award mark.</p>	1															
3	<div style="text-align: center;">  </div> <p style="margin-top: 10px;">Award 1 mark only if line is marked correctly to show the counting and the correct answer is given.</p>	1															
4	<p><math>\frac{3}{8}</math> pizza</p> <p>11 <math>\frac{1}{4}</math> cakes</p>	1															
5	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th style="width: 25%;">Angle</th> <th style="width: 25%;">A</th> <th style="width: 25%;">B</th> <th style="width: 25%;">C</th> </tr> </thead> <tbody> <tr> <td style="background-color: #0070C0; color: white;">Size (degrees)</td> <td style="text-align: center;">110°</td> <td style="text-align: center;">35°</td> <td style="text-align: center;">35°</td> </tr> <tr> <td style="background-color: #0070C0; color: white;">Type</td> <td style="text-align: center;">Obtuse</td> <td style="text-align: center;">Acute</td> <td style="text-align: center;">Acute</td> </tr> </tbody> </table> <p>Isosceles</p> <p>Only award mark if spelling is correct.</p>	Angle	A	B	C	Size (degrees)	110°	35°	35°	Type	Obtuse	Acute	Acute	1			
Angle	A	B	C														
Size (degrees)	110°	35°	35°														
Type	Obtuse	Acute	Acute														
6	<p>There are approximately 2 <b>inches</b> in five centimetres.</p> <p>There are approximately 2 <b>pints</b> in one litre.</p> <p>There are approximately 2 <b>pounds</b> in one kilogram.</p> <p>Examples will vary – ensure they are correct before awarding mark.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #0070C0; color: white;"> <th style="width: 33%;">Conversion</th> <th style="width: 33%;">Operation</th> <th style="width: 33%;">Example</th> </tr> </thead> <tbody> <tr> <td>To convert cm to mm</td> <td style="text-align: center;">× 10</td> <td>13cm = 130mm</td> </tr> <tr> <td>To convert mm to cm</td> <td style="text-align: center;">÷ 10</td> <td></td> </tr> <tr> <td>To convert m to km</td> <td style="text-align: center;">÷ 1000</td> <td></td> </tr> <tr> <td>To convert kg to g</td> <td style="text-align: center;">× 1000</td> <td></td> </tr> </tbody> </table>	Conversion	Operation	Example	To convert cm to mm	× 10	13cm = 130mm	To convert mm to cm	÷ 10		To convert m to km	÷ 1000		To convert kg to g	× 1000		1
Conversion	Operation	Example															
To convert cm to mm	× 10	13cm = 130mm															
To convert mm to cm	÷ 10																
To convert m to km	÷ 1000																
To convert kg to g	× 1000																

Q	Answers	Marks															
7	£362.50  Award one mark for correct procedure and written method but with an incorrect answer.	2															
8	$\begin{array}{r} 42847 \\ - 17263 \\ \hline 25564 \end{array}$	1															
9	2 hours fifteen minutes and thirty seconds	1															
10	<table border="1"> <thead> <tr> <th>Fraction</th> <th>Decimal</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td><math>\frac{1}{2}</math></td> <td>0.5</td> <td>50%</td> </tr> <tr> <td><math>\frac{1}{4}</math></td> <td>0.25</td> <td>25%</td> </tr> <tr> <td><math>\frac{3}{10}</math> (also accept <math>\frac{30}{100}</math>)</td> <td>0.3</td> <td>30%</td> </tr> <tr> <td><math>\frac{4}{5}</math> or <math>\frac{8}{10}</math></td> <td>0.8</td> <td>80%</td> </tr> </tbody> </table>	Fraction	Decimal	Percentage	$\frac{1}{2}$	0.5	50%	$\frac{1}{4}$	0.25	25%	$\frac{3}{10}$ (also accept $\frac{30}{100}$ )	0.3	30%	$\frac{4}{5}$ or $\frac{8}{10}$	0.8	80%	1
Fraction	Decimal	Percentage															
$\frac{1}{2}$	0.5	50%															
$\frac{1}{4}$	0.25	25%															
$\frac{3}{10}$ (also accept $\frac{30}{100}$ )	0.3	30%															
$\frac{4}{5}$ or $\frac{8}{10}$	0.8	80%															
11	<table border="1"> <thead> <tr> <th>Car</th> <th>Price</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>£52,250</td> </tr> <tr> <td>A</td> <td>£33,333</td> </tr> <tr> <td>E</td> <td>£12,295</td> </tr> <tr> <td>B</td> <td>£8475</td> </tr> <tr> <td>D</td> <td>£3125</td> </tr> </tbody> </table> B	Car	Price	C	£52,250	A	£33,333	E	£12,295	B	£8475	D	£3125	1			
Car	Price																
C	£52,250																
A	£33,333																
E	£12,295																
B	£8475																
D	£3125																
12	$\begin{array}{r} 332 \\ \times 15 \\ \hline 1660 \\ 3320 \\ \hline 4980 \end{array}$	1															
13	$6^2 + 8^2 = 36 + 64 = 100$ $100 = 10^2$ so Leila is right  Award 1 mark for correct approach and clear understanding of square numbers but with wrong answer.	2															



Q	Answers	Marks
14	4 seconds 3.25m or $3\frac{1}{4}$ m or 3m 25cm	1 1
15	5 right, 1 up 	1 1
16	0.216 0.311	1 1
17	From Ashworth to Barton: 38 children From Ashworth to Chivers: 42 children	1
18	Perimeter = 32m Area = 49m <sup>2</sup>	1 1
19	38,604 Red supporters	1
20	18,550 buttons Award one mark for correct procedure and written method but with an incorrect answer. 106 shirts	2 1
21	35.8 litres, or 35 litres and 800 millilitres Award 1 mark for clear evidence of a reasoned approach to solving the problem, along with correct use of units, but with an incorrect answer.	3
<b>Total</b>		<b>35</b>