

Lancashire Curriculum Tests

Year 5 – End of Spring Term

(On track to meet end of year expectations)

Mathematics test administration guide and mark schemes

Paper 1: arithmetic

Paper 2: reasoning

Administration guide

Format	<ul style="list-style-type: none">• This test consists of two papers, an arithmetic paper and a reasoning paper.• The arithmetic paper will take 30 minutes and the reasoning paper will take 40 minutes to complete.• It is at your discretion to choose when or if pupil(s) require a break during each test or whether, if appropriate, to stop the test early.• The test may be administered as a class or in groups, whichever is deemed most suitable. The assistance guidance should be followed in either situation.
Equipment	<p>Each pupil will need the equipment specified below:</p> <ul style="list-style-type: none">• a pencil• a ruler (showing centimetres and millimetres)• a rubber (optional). If rubbers are not provided, you should tell pupils that they may cross out any answers they wish to change• a mirror (reasoning paper only) <p>Pupils are not allowed to use calculators in the test.</p>
Assistance	<ul style="list-style-type: none">• You must ensure that nothing you say or do during a test could be interpreted as giving pupils an advantage, e.g. indicating that an answer is correct or incorrect, or suggesting the pupil looks at an answer again.• If a pupil requests it, a question may be read to them on a one-to-one basis. However, adults can only read numbers and not mathematical symbols. This is to ensure that pupils are not given an unfair advantage by having the function inadvertently explained by reading its name.

General marking principles

The marking guidance within these tests directly reflects the guidance for the national end of key stage tests 2016.

<p>1. The pupil's answer does not match closely any of the examples given in the mark scheme.</p>	<p>Use your judgement in deciding whether the answer corresponds with details in the 'Requirement' column of the mark scheme. Reference will also be made to the 'Additional guidance' column.</p>
<p>2. The pupil has answered in a non-standard way.</p>	<p>Pupils may provide evidence in any form as long as its meaning can be understood. Diagrams, symbols or words are acceptable for explanations or for indicating an answer.</p>
<p>3. The answer in the answer box is wrong due to a misread of numbers (paper 2 only).</p>	<p>A misread occurs when a pupil misreads a number given in the question and consistently uses a different number that does not alter the original intention or difficulty of the question. For example, if '243' is misread as '248', both numbers may be regarded as comparable in difficulty. However, if '243' is misread as '245' or '240', the misread number may be regarded as making the question easier. The misread of a number may affect the award of marks.</p> <p>Where appropriate, detailed guidance will be given in the mark scheme. If no guidance is given, examine each case to decide whether the mark(s) will be awarded.</p> <p>No marks are awarded if:</p> <ul style="list-style-type: none"> • it is a ONE-mark question • there is more than one misread number in a question • the mathematics is simplified • it is an explanation question • it is a misread of other information (not numbers). <p>For TWO-mark questions that have a method mark, ONE mark will be awarded if the correct method is correctly followed through with the misread number provided the mathematics has not been simplified.</p> <p>For THREE-mark questions, refer to the additional guidance.</p>
<p>4. No answer is given in the expected place, but the correct answer is given elsewhere.</p>	<p>Where a pupil has unambiguously indicated the correct answer, the mark(s) will be awarded. In particular, where a word or number is expected, a pupil may meet the requirement by annotating a graph or labelling a diagram elsewhere in the question.</p>
<p>5. The pupil's answer is correct, but the wrong working is shown.</p>	<p>A correct final answer will be awarded the mark(s).</p>
<p>6. The answer in the answer box is wrong due to a transcription error.</p>	<p>A transcription error occurs when a pupil miscopies the correct answer from the end of their working into the answer box.</p> <p>Where appropriate, detailed guidance will be given in the mark scheme. For questions with no guidance, marks will not be awarded for a transcription error unless the following rules apply:</p> <ul style="list-style-type: none"> • the wrong answer is due to a transcription error; i.e. the wrong answer is due to transposed digits in a number (e.g. 243 is written as 423); if so, the mark(s) will be awarded. <p>OR</p> <ul style="list-style-type: none"> • the wrong answer is due to one digit being changed in a number of 4 or more digits (e.g. 2345 is written as 2845); if so, the mark(s) will be awarded.

	<ul style="list-style-type: none"> the pupil has continued to give redundant extra working which does not contradict the work already done; if so, the mark(s) will be awarded. the pupil has continued to give redundant extra working which does contradict work already done; if so, the mark(s) will not be awarded.
7. The pupil's answer correctly follows through from earlier incorrect work.	'Follow through' marks for an answer will only be awarded when specifically stated in the mark scheme.
8. The correct answer has been crossed out and not replaced.	No marks will be awarded for crossed-out answers or working.
9. More than one answer is given.	If all answers given are correct (or a range of answers is given, all of which are correct), the mark(s) will be awarded unless the mark scheme states otherwise. If both correct and incorrect answers are given, no mark(s) will be awarded unless the mark scheme states otherwise.
10. The pupil's answer is numerically or algebraically equivalent to the answer in the mark scheme.	Answers should be given as single values in their simplest form unless the mark scheme states otherwise, e.g. for $\square = 536 - 30$, the answer $500 + 6$ will not be accepted. Refer to the 'Additional guidance' column to determine if the mark(s) will be awarded.
11. The pupil has used a symbol as a separator of thousands.	Only accept the use of a comma as a separator of thousands (either correctly or incorrectly placed). If the digits are in the correct order, the mark(s) will be awarded. If any other symbol is used the mark(s) will not be awarded.
12. The correct answer is embedded in the working (paper 2 only).	<p>An embedded answer occurs when a pupil shows the correct answer within their working but then selects the wrong answer from their working as their final answer or leaves the answer box blank. For example, if a pupil shows '$2.5 \times 6 = 3 \times 5$' in the last line of their working and writes 5 in the answer box whereas the correct answer is 3, then this will affect the award of marks.</p> <p>Where appropriate, detailed guidance will be given in the mark scheme. If no guidance is given, examine each case to decide whether the mark(s) will be awarded.</p> <p>For ONE-mark questions, no mark will be awarded.</p> <p>For TWO-mark questions that have a method mark, ONE-mark will be awarded provided the pupil does not give redundant extra working which contradicts work already done.</p> <p>For THREE-mark questions, refer to the additional guidance.</p>
13. The pupil has drawn lines which do not meet at the correct point.	'Slight inaccuracies in drawing' means within or on a circle of radius 2 mm with its centre at the correct point.

Marking specific types of question: summary of additional guidance

Answers involving money

	Accept	Do not accept
Where the £ sign is given, e.g. £3.20, £7 <div>£</div>	£3.20 £7 £7.00 Any unambiguous indication of the correct amount, e.g. £3.20p £3 20 pence £3 20 £3-20 £3:20	Incorrect placement of pounds or pence, e.g. £320 £320p Incorrect placement of decimal point or incorrect use or omission of 0 or use of comma as a decimal point, e.g. £3.2 £3 200 £32 0 £3-2-0 £3,20
Where the p sign is given, e.g. 40p <div>p</div>	40p Any unambiguous indication of the correct amount, e.g. £0.40p	Incorrect or ambiguous use of pounds or pence or use of comma as a decimal point, e.g. 0.40p £40p £0,40p
Where no sign is given, e.g. £3.20, 40p <div></div>	£3.20 40p 320p £0.40 Any unambiguous indication of the correct amount, e.g. £3.20p £0.40p £3 20 pence £.40p £3 20 £.40 £3-20 40 £3:20 0.40 3.20 320 3 pounds 20	Incorrect or ambiguous use of pounds or pence or use of comma as a decimal point, e.g. £320 £40 £320p £40p £3.2 0.4 3.20p 0.40p £3,20 0,40p £0,40p

Answers involving time

	Accept	Do not accept
A time interval, e.g. 2 hours 30 minutes	2 hours 30 minutes Any unambiguous, correct indication, e.g. (0)2h 30 150 minutes (0)2h 30 min 150 (0)2 30 2.5 hours (0)2-30 $2\frac{1}{2}$ hours Digital electronic time, i.e. (0)2:30 (0)2;30	Incorrect or ambiguous time interval or use of comma as a decimal point, e.g. 2.30 2.3 hours 2,30 2.3h 230 2h 3 2.3 2.30 min 2,5 hours
A specific time, e.g. 8:40am, 17:20	(0)8:40am (0)8:40 twenty to nine Any unambiguous, correct indication, e.g. (0)8.40 (0)8;40 0840 (0)8 40 (0)8-40 Unambiguous change to 12- or 24-hour clock, e.g. 17:20 as 5:20pm or 17:20pm	Incorrect time, e.g. 8.4am 8.40pm Incorrect placement of separators, spaces, etc. or incorrect use or omission of 0 or use of a comma as a decimal point, e.g. 840 8:4:0 8.4 084 8,40

Answers involving measures

	Accept	Do not accept
Where units are given, e.g. 8.6kg <div style="border: 1px solid black; padding: 2px; display: inline-block; margin: 5px;">kg</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin: 5px;">m</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin: 5px;">l</div>	8.6kg Any unambiguous indication of the correct measurement, e.g. 8.60kg 8.6000kg 8kg 600g	Incorrect or ambiguous use of units or use of comma as a decimal point, e.g. 8600kg 8kg 600 8,60kg 8,6000kg

If a pupil gives an answer with a unit different to the unit in the answer box, then their answer must be equivalent to the correct answer provided, unless otherwise indicated in the mark scheme.

If a pupil leaves the answer box empty but writes the answer elsewhere on the page without any units, then that answer is assumed to have the units given in the answer box and the conditions listed above.

Mark schemes for Paper 1: arithmetic

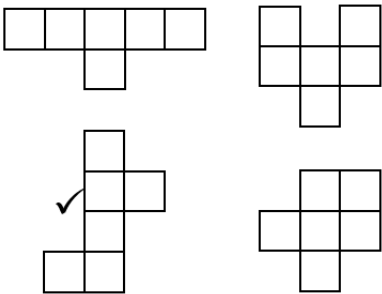
Qu.	Requirement	Mark	Additional guidance
1	564,842	1m	
2	8.32	1m	
3	$3\frac{2}{3}$ or $\frac{11}{3}$	1m	
4	0.8	1m	
5	1,187.55	1m	
6	30,000	1m	
7	3.07	1m	
8	7.8	1m	
9	2 or $\frac{2}{5}$	1m	
10	53.2	1m	
11	1,238	1m	
12	24.35	1m	
13	622	1m	
14	229	1m	
15	58,413	1m	
16	17 or $\frac{17}{50}$	1m	
17	60.37	1m	
18	33	1m	
19	$\frac{9}{10}$	1m	
20	2	1m	Do not accept $\frac{2}{3}$ or 0.66 as the question is asking for the remainder as a whole number.
21	920.67	1m	
22	26.11	1m	
23	9	1m	
24	245	1m	
25	4.7	1m	
26	1	1m	
27	545.4	1m	
28	<p>Award TWO marks for the correct answer of 2,312</p> <p>If the answer is incorrect, award ONE mark for the formal method of long multiplication with no more than ONE arithmetic error, i.e.</p> $ \begin{array}{r} 68 \\ \times 34 \\ \hline 272 \\ + 2040 \\ \hline 2212 \\ \hline 1 \end{array} $ <p>error omitting 'carried' 100</p>	up to 2m	<p>Working must be carried through to reach a final answer for the award of ONE mark.</p> <p>Do not award any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens:</p> $ \begin{array}{r} 68 \\ \times 34 \\ \hline 272 \\ + 204 \\ \hline 476 \end{array} $ <p>place value error</p>

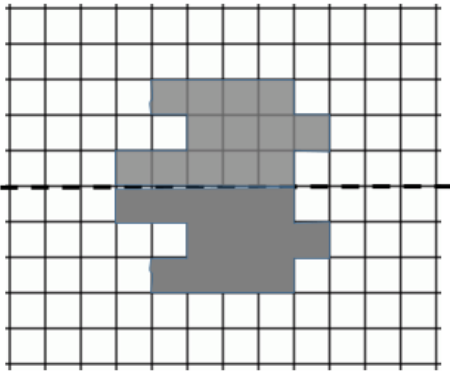
29	<p>Award TWO marks for the correct answer of 10,935</p> <p>If the answer is incorrect, award ONE mark for the formal method of long multiplication with no more than ONE arithmetic error, i.e.</p> $ \begin{array}{r} 243 \\ \times 45 \\ \hline 1215 \quad \text{error omitting} \\ ^2 \\ + 9620 \quad \text{the 'carried' 100} \\ \hline 10835 \end{array} $	up to 2m	<p>Working must be carried through to reach a final answer for the award of ONE mark.</p> <p>Do not award any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens:</p> $ \begin{array}{r} 243 \\ \times 45 \\ \hline 1215 \\ + 962 \quad \text{place value error} \\ \hline 2177 \end{array} $
30	30.6	1m	
31	1,101	1m	
32	100	1m	
33	8	1m	
34	37 or $\frac{37}{8}$	1m	
35	3	1m	
36	348.76	1m	
37	-4	1m	
38	27,126	1m	

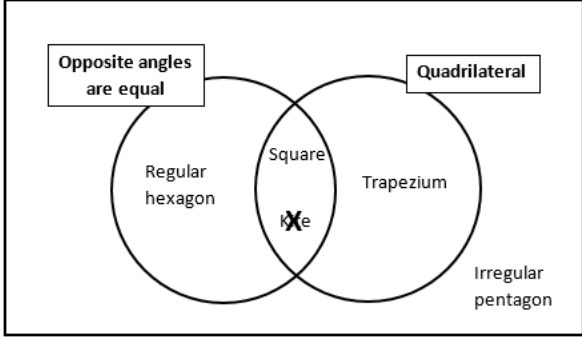
Total of 40 marks

Mark schemes for Paper 2: reasoning

Qu.	Requirement	Mark	Additional guidance
1	340,926	1m	
2	£18.95	1m	
3	64°	1m	
4	600cm	1m	
5	$\frac{7}{8}$ or seven eighths	1m	Accept the answer even if the fraction strips have not been used.
6	<p>square <input checked="" type="checkbox"/></p> <p>pentagon <input type="checkbox"/></p> <p>equilateral triangle <input checked="" type="checkbox"/></p>	1m	<p>Accept alternative unambiguous positive indications, e.g. circles around the two correct answers.</p> <p>Both must be correct for the award of ONE mark.</p>
7	45m²	1m	
8	8:45pm	1m	<p>The answer is an amount of time – see earlier guidance.</p> <p>Do not accept 8:45 at night (in the evening).</p>

9a	Accept 46°C to 48°C inclusive	1m	
9b	Accept 9:33am or 9:34am	1m	
10	<p>Award TWO marks for all four numbers placed correctly as shown:</p> <p>12 x 20 <input checked="" type="checkbox"/></p> <p>80 x 30 <input type="checkbox"/></p> <p>4 x 60 <input checked="" type="checkbox"/></p> <p>30 x 8 <input checked="" type="checkbox"/></p> <p>40 x 60 <input type="checkbox"/></p> <p>If the answer is incorrect, award ONE mark for two factor pairs identified correctly with no others ticked.</p> <p>OR</p> <p>Award ONE mark for all three correct answers and only one incorrect answer ticked.</p>	up to 2m	Accept alternative unambiguous positive indications, e.g. calculations circled.
11	<p>252 258 264 270 276</p> <p>Award ONE mark for any three or four correct answers and no more than one incorrect answer.</p>	up to 2m	
12	<div> <div>13,500</div> <div>23,500</div> <div>33,500</div> <div>43,500</div> <div>53,500</div> </div>	1m	Both must be correct for the award of ONE mark .
13		1m	Accept alternative unambiguous positive indications, e.g. the net circled.

14	<p>Award THREE marks for the correct answer of £3.75</p> <p>If the answer is incorrect, award TWO marks for:</p> <ul style="list-style-type: none"> Sight of £5.10 (510p) AND £7.50 as both the multiplication and addition steps completed correctly AND an attempt to find the half of this amount Or evidence of an appropriate complete method with no more than one arithmetic error, e.g. $£0.85 \times 6 + £2.40 = a$ $a \div 2 = \text{answer}$ <p>Award ONE mark for evidence of an appropriate complete method.</p>	up to 3m	<p>Answer need not be obtained for the award of ONE mark.</p> <p>A misread of a number may affect the award of marks. NO marks are awarded if there is more than one misread or if the mathematics is simplified.</p> <p>TWO marks will be awarded if an appropriate complete method with the misread number is followed through correctly.</p>
15	$\frac{23}{6}$ or twenty-three sixths	1m	
16	<p>Award TWO marks for an explanation that shows that £165,900 is £34,100 away from £200,000 and that £235,900 is £35,900 away from £200,000 and that £34,100 is less than £35,900, so house A is closer in value.</p> <p>Award ONE mark for an explanation that correctly calculates the difference between each house price and £200,000 but doesn't identify which difference is smaller and therefore which house is closer in value.</p>	up to 2m	Award NO marks for simply identifying that house A is the closer in value.
17	<p>Award TWO marks for the correct answer of 4 minutes and 48 seconds</p> <p>If the answer is incorrect, award ONE mark for evidence of a correct method with no more than one arithmetic error, e.g. $3:36 \div 3 = a$ $a \times 4 = \text{answer}$.</p>	up to 2m	<p>The answer is an amount of time – see earlier guidance.</p> <p>Do not accept errors that have been made through not acknowledging the fact that there are 60 seconds in 1 minute.</p>
18	100	1m	
19		1m	

20	360	1m	
21a	24cm ³	1m	
21b	1cm 1cm 24cm (in any order) 1cm 2cm 12cm (in any order) 1cm 3cm 8cm (in any order) 1cm 4cm 6cm (in any order) 2cm 2cm 6cm (in any order) If the answer is incorrect, award ONE mark for dimensions that match an incorrectly identified volume of Ben's cuboid, e.g. Ben's cuboid 18cm ³ AND dimension of 1cm, 2cm and 9cm in any order.	1m	
22		1m	Accept alternative unambiguous positive indications that kite is incorrectly placed e.g. kite ticked or circled. Award NO marks if any other shapes are indicated as incorrectly placed.
23	4,500	1m	
24	Estimates in the range of 35° - 45° inclusive	1m	
25	Award ONE mark for an explanation identifying that the starting number and the number being subtracted have changed by the same amount (20,000) so the difference/answer will be the same as in the given calculation.	1m	Do not award a mark for simply carrying out the calculation: 65,621 – 52,954 = 12,667
26	Award TWO marks for all three boxes filled correctly as shown: <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">1,375m</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">÷ 1000</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px;">1.375km</div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">43.6kg</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">x 1000</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px;">43,600g</div> </div> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">0.42 litres</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">x 1000</div> <div style="margin: 0 10px;">→</div> <div style="border: 1px solid black; padding: 5px;">420ml</div> </div> If the answer is incorrect, award ONE mark for two boxes filled correctly.	up to 2m	

Total of 35 marks