MATHEMATICS MARK SCHEMES

LEVEL 6 TESTS

Mark schemes

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Introduction

This booklet contains the mark schemes for papers 1 and 2 of the Optional level 6 tests in mathematics.

Each mark scheme was devised after trialling the tests with pupils and contains examples of some frequently occurring correct and incorrect answers given in the trials. Each mark scheme indicates the criteria against which judgements should be made.

The last section of this booklet provides information about interpreting the scores from the tests.

General guidance

The structure of the mark schemes

The marking information for each question is set out in the form of tables, which start on page 12 of this booklet. The '**Q**' column on the left-hand side of each table provides a quick reference to the question number. The '**mark**' column indicates the total number of marks available for each question part.

On some occasions the symbol (U1) may be shown in the mark column. The 'U' indicates that there is a *Using and applying mathematics* element in the question. The number, 1, shows the number of marks attributed to using and applying mathematics in this question.

The '**correct response**' column may include two types of information:

- a statement of the requirements for the award of each mark, with an indication of whether credit can be given for correct working

- examples of some different types of correct response.

The '**additional guidance**' column indicates alternative acceptable responses, and provides details of specific types of response which are unacceptable. Other guidance, such as the range of acceptable answers, or when 'follow-through' is allowed, is provided as necessary.

Applying the mark schemes

In order to ensure consistency of marking, the most frequent procedural queries are listed on pages 6 and 7 along with the action the marker will take. This is followed by further guidance relating to the marking of questions that involve money, time and other measures, coordinates, probability and algebra. Unless otherwise specified in the mark scheme, markers should apply the following guidelines in all cases.

What if…	Marking procedure	
The pupil's response is numerically equivalent to the answer in the mark scheme.	Markers should award the mark unless the mark scheme states otherwise.	
The pupil's response does not match closely any of the examples given.	Markers should use their judgement in deciding whether the response corresponds with the statement of the requirements given in the 'correct response' column. Reference will also be made to the 'additional guidance' and, if there is still uncertainty, markers should consult the supervising marker.	
The pupil has responded in a non-standard way.	Calculations, formulae and written responses do not have to be set out in any particular format. 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 a response. Any correct method of setting out working, however idiosyncratic, should be accepted. Provided there is no ambiguity, condone the continental practice of using a comma for a decimal point.	
There appears to be a misreading affecting the working.	This is when the pupil misreads the information given in the question and uses different information without altering the original intention or difficulty level of the question. For each misread that occurs, deduct one mark only.	
No answer is given in the expected place, but the correct answer is given elsewhere.	Where a pupil has shown understanding of the question, the mark(s) should be given. 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.	
The response in the answer box is wrong, but the correct answer is shown in the working.	Where appropriate, detailed guidance will be given in the mark scheme, which markers should follow. If no guidance is given, markers will need to examine each case to decide whether:	
	• the incorrect answer is due to a transcription error	If so, the mark should be awarded.
	• in questions not testing accuracy, the correct answer has been given but then rounded or truncated	If so, the mark should be awarded.
	• the pupil has continued to give redundant extra working which does not contradict work already done	If so, the mark should be awarded.
	• the pupil has continued to give redundant extra working which does contradict work already done.	If so, the mark should not be awarded. Where a question part covers more than one mark, only the final mark should be withheld.

What if…	Marking procedure
The pupil's answer is correct but the wrong working is shown.	A correct response should always be marked as correct unless the mark scheme states otherwise.
The pupil has made a conceptual error.	In some questions, a method mark is available provided the pupil has made a computational, rather than conceptual, error. A computational error is a 'slip' such as writing $4 \times 6 = 18$ in an otherwise correct long multiplication. A conceptual error is a more serious misunderstanding of the relevant mathematics; when such an error is seen no method marks may be awarded. Examples of conceptual errors are: • misunderstanding of place value, such as multiplying by 2 rather than 20 when calculating 35×27 • subtracting the smaller value from the larger in calculations such as $45 - 26$ to give the answer 21 • incorrect signs when working with negative numbers.
The correct response has been crossed out and not replaced.	Any legible crossed-out work that has not been replaced should be marked according to the mark scheme. If the work is replaced, then crossed-out work should not be considered.
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 should be awarded unless prohibited by the mark scheme. If both correct and incorrect responses are given, no mark should be awarded.
The pupil's answer correctly follows through from earlier incorrect work.	Follow-through marks may be awarded only when specifically stated in the mark scheme, but should not be allowed if the difficulty level of the question has been lowered. Either the correct response or an acceptable follow-through response should be marked as correct.
The answer is correct but, in a later part of the question, the pupil has contradicted this response.	A mark given for one part should not be disallowed for working or answers given in a different part, unless the mark scheme specifically states otherwise.
The pupil's accuracy is marginal according to the overlay provided.	Overlays can never be 100% accurate. However, provided the answer is within, or touches, the boundaries given, the mark(s) should be awarded.
The pupil has drawn lines which do not meet at the correct point.	Markers should interpret the phrase 'slight inaccuracies in drawing' to mean 'within or on a circle of radius 2mm with centre at the correct point'.
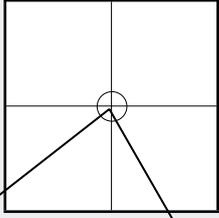
within the circle accepted   on the circle accepted   outside the circle not accepted
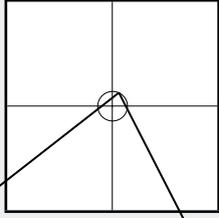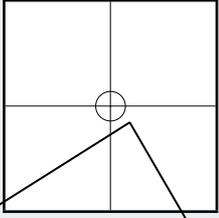
Marking specific types of question

Responses involving money

	Accept	Do not accept
Where the £ sign is given *for example: £3.20, £7* £	£3.20 £7 £7.00 Any unambiguous indication of the correct amount, eg £3.20p £3 20 pence £3 20 £3,20 £3-20 £3:20 320p with £ sign crossed out	Incorrect placement of pounds or pence, eg £320 £320p Incorrect placement of decimal point, or incorrect use or omission of 0, eg £3.2 £3 200 £32 0 £3-2-0
Where the p sign is given *for example: 40p* p	40p Any unambiguous indication of the correct amount, eg £0.40p £.40p £0.40 with p sign crossed out	Incorrect or ambiguous use of pounds or pence, eg 0.40p £40p
Where no sign is given *for example: £3.20, 40p*	£3.20 320p 40p £0.40 £3.20p Any unambiguous indication of the correct amount in £ or p as shown above	Omission of final zero, eg 3.2 0.4

Responses involving time

	Accept	Do not accept
A time interval for example: 2 hours 30 minutes	2 hours 30 minutes Any unambiguous, correct indication, eg $2\frac{1}{2}$ hours 2.5 hours 2h 30 2h 30 min 2 30 Digital electronic time, ie 2:30	Incorrect or ambiguous time interval, eg 2.3 hours 2.3h 2h 3 2.30 min 2.30 2-30 2,30 2.3
A specific time for example: 8:40am, 17:20	8:40am 8:40 twenty to nine Any unambiguous, correct indication, eg 08.40 8.40 0840 8 40 8-40 8,40 Unambiguous change to 12 or 24 hour clock, eg 17:20 as 5:20pm or 17:20pm	Incorrect time, eg 8.4am 8.40pm Incorrect placement of separators, spaces, etc or incorrect use or omission of 0, eg 840 8:4:0 8.4 084 84

Responses involving measures

	Accept	Do not accept
Where units are given (eg kg, m, l) for example: 8.6kg ┌──────┐ │ **kg** │ └──────┘	8.6kg Any unambiguous indication of the correct measurement, eg 8.60kg 8.6000kg 8kg 600g	Incorrect or ambiguous use of units, eg 8600kg

Note

If a pupil leaves the answer box empty but writes the answer elsewhere on the page, then that answer must be consistent with the units given in the answer box and the conditions listed above.

If a pupil changes the unit given in the answer box, then their answer must be equivalent to the correct answer using the unit they have chosen, unless otherwise indicated in the mark scheme.

Responses involving coordinates

	Accept	Do not accept
For example: *(5, 7)*	Unconventional notation, eg (05, 07) (five, seven) $\overset{x\ \ y}{(5,\ 7)}$ $(x=5,\ y=7)$	Incorrect or ambiguous notation, eg (7, 5) $\overset{y\ \ x}{(7,\ 5)}$ $(5x,\ 7y)$ $(5^x,\ 7^y)$ $(x-5,\ y-7)$

Responses involving probability

|	Accept	Take care ! Do not accept ✗
A numerical probability should be expressed as a decimal, fraction or percentage only. *For example:* $0.7 \quad \dfrac{7}{10} \quad 70\%$	Equivalent decimals, fractions and percentages, eg 0.700 $\dfrac{70}{100}$ $\dfrac{35}{50}$ 70.0% A probability correctly expressed in one acceptable form which is then incorrectly converted, but is still less than 1 and greater than 0, eg $\dfrac{70}{100} = \dfrac{18}{25}$	The first **four** categories of error below should be ignored if accompanied by an acceptable response, but should not be accepted on their own. However, to avoid penalising the first **three** types of error below more than once within each question, do not award the mark for the *first* occurrence of each type of error unaccompanied by an acceptable response. Where a question part carries more than one mark, only the final mark should be withheld. ! A probability that is incorrectly expressed, eg 7 in 10 7 over 10 7 out of 10 7 from 10 ! A probability expressed as a percentage without a percentage sign. ! A fraction with other than integers in the numerator and/or denominator. ! A probability expressed as a ratio, eg 7:10, 7:3, 7 to 10 ✗ A probability greater than 1 or less than 0

Responses involving the use of algebra

	Accept	Take care ! Do not accept ×
For example: $2 + n$ $n + 2$ $2n$ $\dfrac{n}{2}$ n^2	Unambiguous use of a different case or variable, eg N used for n x used for n	**!** Unconventional notation, eg $n \times 2$, or $2 \times n$, or $n2$ or $n + n$ for $2n$ $n \times n$ for n^2 $n \div 2$ for $\dfrac{n}{2}$ or $\dfrac{1}{2}n$ $2 + 1n$ for $2 + n$ $2 + 0n$ for 2 Within a question that demands simplification, do not accept as part of a final answer involving algebra. Accept within a method when awarding partial credit, or within an explanation or general working. **×** Embedded values given when solving equations, eg in solving $3x + 2 = 32$, $3 \times 10 + 2 = 32$ for $x = 10$ To avoid penalising the two types of error below more than once within each question, do not award the mark for the *first* occurrence of each type within each question. Where a question carries more than one mark, only the final mark should be withheld.
	Words used to precede or follow equations or expressions, eg $t = n + 2$ tiles or tiles $= t = n + 2$ for $t = n + 2$	**!** Words or units used within equations or expressions, eg n tiles $+ 2$ n cm $+ 2$ Do not accept on their own. Ignore if accompanying an acceptable response.
	Unambiguous letters used to indicate expressions, eg $t = n + 2$ for $n + 2$	**×** Ambiguous letters used to indicate expressions, eg $n = n + 2$ for $n + 2$

Paper 1

Q	Mark	Correct response	Additional guidance
1	2m	Completes all 8 entries of the table correctly, ie	

	... do wear glasses	... do not wear glasses	Total
...boys	1	15	16
... girls	3	11	14
Total	4	26	30

Q	Mark	Correct response	Additional guidance
	or 1m (U2)	Completes at least four entries correctly	
2	2m	Indicates correct coordinates for both points, ie A as (7, 13) and B as (17, 13)	
	or 1m	Indicates correct coordinates for one point or Transposes the responses, ie A as (17, 13) and B as (7, 13) or The only error is to indicate incorrect, but consistent, y ordinates, provided $y > 3$ eg • A as (7, 12) and B as (17, 12) (U2)	
3	2m *or* 1m	16 8 or Answer of 17 with $\frac{50}{3}$ or equivalent seen (the only error is to fail to subtract 1 at the start) or Shows understanding of a correct method even if there are computational errors eg • $\frac{2}{3} \times 24 = 12$ (U1)	✗ *Answer of 17 without $\frac{50}{3}$ or equivalent seen*
4	1m	1 : 3	
	1m	28%	✗ *Equivalent fractions or decimals*

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Paper 1

Q	Mark	Correct response	Additional guidance
5	2m	Gives all three correct values, ie $a = 16, b = 8, c = 6$ *or* **1m** Gives at least one correct value or Gives three values that satisfy the second and third equations eg • $a = 18, b = 6, c = 8$ (satisfies $a + b = 24$ and $b + c = 14$: note that $a - c = 10$)	
6	1m	Indicates the correct area eg •	✓ *Unambiguous indication*
	1m	Indicates the correct area eg •	✓ *Unambiguous indication*
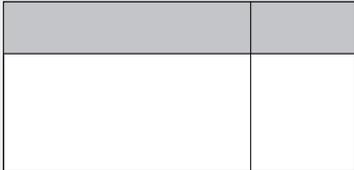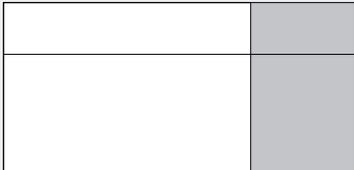
Paper 1

Q	Mark	Correct response	Additional guidance
7	1m	Gives a correct description for B that shows or implies the link between the two variables eg • The more computers a person has in their home, the fewer hours they are likely to spend watching television • There is negative correlation between the number of hours watched and the number of computers in the home • If you have lots of computers you don't tend to watch TV much	✓ *Minimally acceptable description* eg • More computers, less watching • Fewer computers, more TV • More television, less computers • Less TV, more computers • Negative correlation ! *Number of hours watching interpreted incorrectly as number of televisions* Condone eg, for the first mark accept • The more computers people have, the fewer TVs they have ✗ *Incomplete description* eg • If you have one computer you watch more TV
	1m	Gives a correct description for C that states or implies that the two variables are not linked eg • How much television a person watches is independent of the number of mobile phones they have • There is no correlation between the number of hours watched and the number of phones • Time watching is not dependent on the amount of mobiles • People with lots of mobile phones don't necessarily watch any more than those with just one	✓ *Minimally acceptable description* eg • Mobiles don't affect watching • No correlation • Not connected • No relationship • No link • No pattern • It's random • More or less phones won't affect hours • Number of mobiles doesn't affect the situation • Someone watching 1 hour of TV might have as many mobiles as someone who watches 8 hours [generality implied] • How much is watched depends on the person not on their mobile phones ✗ *Incomplete description* eg • There is a range of numbers of mobile phones and the number of hours spent watching TV • It doesn't make much difference ! *Description of graph's appearance* Accept alongside a correct response eg, for C accept • It's all spread out so there is no link eg, for C do not accept • It's all spread out

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Paper 1

Q.	Mark	Correct response	Additional guidance
8	1m	Indicates No and gives a correct explanation eg • The angles are not the same size • A regular pentagon looks like this, with its angles all the same size • All the angles should be 108° • It doesn't have rotation symmetry • It's got more sides than a square so all its angles should be obtuse, but they're not	✓ *Minimally acceptable explanation* eg • $90 \neq 150$ • Different angles • A regular pentagon doesn't have right angles in it • A regular one can't have 150° angles • It doesn't look the same when it's turned • Not all the angles are obtuse ! *Incorrect angle size for a regular pentagon given* Condone alongside a correct response eg, accept • The angles are different, they should be *60° (error, but all equal implied)* • The angles should all be *70° (error)* eg, do not accept • The 90° angles should be 60° *(does not imply the angles should all be the same)* ✗ *Incomplete explanation* eg • Not the same • It has two right angles • Two angles are the same • A regular pentagon looks like this • A regular pentagon doesn't have any vertical lines ! *Indicates Yes, or no decision made, but explanation clearly correct* Condone provided the explanation is more than minimal
	2m *or* 1m	60° Shows that the 150° angle can be split into 90° and 60° or Divides the pentagon vertically and shows that half *a* is 30° or Draws triangles to show a rectangle, labelling the non-right angles on at least one side correctly eg • or Shows or implies that the angle sum of a pentagon is 540°	
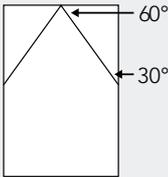
Paper 1

Q	Mark	Correct response	Additional guidance
9	1m	Indicates D **then** Indicates B	
	1m	Gives a correct equation eg • $y = 4$ • $y - 4 = 0$	✓ *Line not drawn or incorrect* ✗ *Follow-through from their incorrect line*
10	1m Ⓤ1	Joins dots to make a triangle that has only one side of 4cm and only one angle of 45°.	! *Lengths or angles shown on their triangle(s)* Ignore, even if incorrect ✗ *Dots not used*
11	1m	16	
	1m	800	
12	1m Ⓤ1	Gives four numbers that sum to 16 and have a range of 4, ie 　1, 5, 5, 5 or 　2, 2, 6, 6 or 　2, 3, 5, 6 or 　2, 4, 4, 6 or 　3, 3, 3, 7	✓ *Numbers given in any order* eg • 3, 7, 3, 3 ✓ *Decimals or fractions used* eg • 1.5, 4, 5, 5.5

Paper 1

| Q	Mark	Correct response	Additional guidance
13	1m (U1)	19	
14	1m (U1)	Indicates the answer could be positive or negative and gives a correct explanation eg • A positive multiplied by −5 gives a negative answer, but a negative multiplied by −5 gives a positive answer • Positive numbers will become negative, negative numbers will become positive • If the number is 10 the answer will be −50, which is negative, but if the number is −10, the answer is 50, ie positive	✓ *Minimally acceptable explanation* eg • 10 becomes negative, but −10 becomes positive • +ve ➙ −ve −ve ➙ +ve • −5 × −3 = 15, −5 × 3 = −15 ✗ *Incomplete explanation* eg • −5 × 3 = −15 • The original number could be positive or negative so the answer could be positive or negative ! *Makes an incorrect decision, or no decision made, but explanation clearly correct* Condone provided the explanation is more than minimal

Paper 2

Q	Mark	Correct response	Additional guidance
1	1m	Shows the correct rotation, ie	**!** *Lines not ruled or accurate* Accept slight inaccuracies in drawing (see general guidance)
2	1m 1m (U1)	20 33.125	✓ *Equivalent fractions or decimals*
3	2m *or* 1m	Completes all three rows correctly, ie ✓ ☐ ☐ ☐ ✓ ☐ ✓ ☐ ☐ ☐ ✓ ☐ Completes two rows correctly	
4	2m *or* 1m	26 Shows or implies a complete method with not more than one computational error or rounding error eg • 35 x 24.75 = 860 *(error)* 1200 − 860 = 340 340 ÷ 12.5 = 27.2 Answer = 27 • (1200 − 35 x 24.75) ÷ 12.5 • 1200 − 866.25 = 333.75 333.75 ÷ 12.5 or 26.7 seen or Shows the correct total for the trees, ie £1191.25 or Shows the correct change, ie £8.75	✗ *Answer of £26* ✗ *Answer of 27 without a correct method shown or implied* **!** *Method used for ÷ 12.5 is repeated subtraction* Do not accept as a correct method
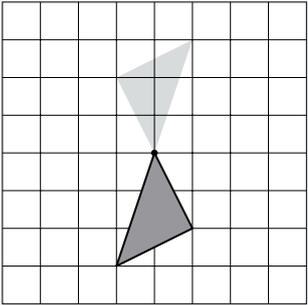
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Paper 2

Q	Mark	Correct response	Additional guidance
5	1m (U1)	Indicates Nik and gives a correct explanation eg • 1 sandwich, 2 apples and 1 banana is missing from the graph and that is what Nik had in his lunch box • The graph shows the correct number of fruit bars and Nik is the only one who does not have a fruit bar in his lunch box so his must be the missing one • The totals from the table are 7, 6, 5, 6, and from the graph 6, 4, 4, 6, and the difference is Nik	✓ *Minimally acceptable explanation* eg • 1 sandwich, 2 apples, 1 banana • Because the number of fruit bars is correct • 1 banana missing • 7, 6, 5, 6 and 6, 4, 4, 6 seen ✗ *Incorrect or incomplete explanation* eg • 1 sandwich, 2 apples • There are 6 fruit bars • 2 apples are missing
6	3m	Completes the drawing according to the following conditions, with a tolerance of 3mm in each case the circle has a diameter of 8cm the highest point at which the circle crosses the central vertical line is 3cm from the top of the answer box the lowest point at which the circle crosses the central vertical line is 7cm from the bottom of the answer box 	✓ *Flag constructed 'upside down'* ! *Shading incorrect or omitted, or additional lines drawn* Condone, provided the response is unambiguous ! *Compasses not used* For pupils who meet one or more of the conditions without using compasses, deduct ONE mark
	or 2m	Any two of the three conditions given above are correct	
	or 1m	Any one of the three conditions given above is correct	

Paper 2

Q	Mark	Correct response	Additional guidance
7	3m	$13\frac{1}{2}$ or equivalent	
	or		
	2m	Shows or implies a complete correct method with not more than one computational error	
		The most common correct methods:	
		Find the total area of the trapezia and divide by 8 eg	✗ **Squaring evaluated as × 2** eg
		• $(12^2 - 6^2) \div 8$	• $(12^2 - 6^2) \div 8 = (24 - 12) \div 8$
		• 144 − 36 = 94 *(error)* 94 ÷ 8 = 11.75	
		Find the dimensions of a trapezium and use the formula or component parts eg	
		• $\frac{1}{2}(3 + 6) \times 3$	
		• $4\frac{1}{2} \times 3$	
		• 3 × 3 + (3 × 3) ÷ 2	
		or	
		The only error is to work with 4 congruent trapezia (not 8), but correctly finds the area of one of them eg	✗ **For 2m, 27 seen with no method**
		• (144 − 36) ÷ 4 = 27	
		• $3^2 = 9$, $9 \times 3 = 27$	
	or		
	1m	Shows or implies a correct method to find the total area of the trapezia eg	! **Brackets omitted** For 1m, condone eg, accept
		• $(12^2 - 6^2)$	• $12^2 - 6^2 \div 8 = 139.5$
		• 144 − 36	
		• 108 seen	
		or	
		Show the parallel sides of the trapezium are 3(cm) and 6(cm), and the height is 3(cm) eg	
	(U1)	• Diagram marked correctly	

Paper 2

Q	Mark	Correct response	Additional guidance
8	1m	The first 3 multiples of 10 **add to 60**	
	1m	The first 4 multiples of 6 **add to 60** or The first 2 multiples of 20 **add to 60** or	
	U1	The first 1 multiples of 60 **add to 60**	

Paper 2

Q.	Mark	Correct response	Additional guidance
9	2m	16.8p or 17p or equivalent	! *Money* See general guidance on page 8
	or 1m	Shows the digits 168 or 17 or Shows a complete correct method with not more than one computational or rounding error eg • 56 × 10 × 3 ÷ 100 • 5.6(0) × 0.03 • 560 ÷ 100 = 5.6 *6p (premature rounding)* × 3 = 18	

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Paper 2

Q	Mark	Correct response	Additional guidance
10	1m	Gives correct information for $x = 4$ eg • 4, too big • 4, too high • 4, too much above 1	✗ *Incomplete information that does not link to the value of 1* eg • 4, too incorrect
	1m	Gives correct information for $x = 3.5$ eg • 1.75, too big	! *In both the first and second answers, shows correct values but omits or gives incorrect further information* eg • 4, too small 1.75, too _____ Do not award the first mark, but award the second mark ! *Value rounded* Accept 1.8 Do not accept 1.7

	1m	Gives a logical value for the next trial, and justifies their decision
		eg
		• 3.2, because I know it is between 3 and 3.5
		• 3.25, it is halfway between 3 and 3 and a half
		• 3.3 because it is bigger than 3 which was too small but smaller than 3.5 which was too big
		• 3.4, it has to be smaller than 3.5 (that it is greater than 3 is implicit)
			! *Logical values*
			Accept any of the following:
			   3.1
			   3.2
			   3.3
			   3.4
			   3.25
			Also accept any value between 3.3 and 3.4 provided their justification shows why the solution is between these values
			eg, accept (since a further trial has clearly taken place)
			• 3.35, 3.3 is too small
			• 3.302, because 3.303 is just over 1
			eg, do not accept
			• 3.35, because I know it is between 3 and 3.5
			
			✓ *Minimally acceptable justification*
			eg
			• 3.2, 3.5 is too big
			
			✗ *Incomplete justification*
			eg
			• 3.3, it gets closer to 1
			• 3.25 because it is at an appropriate interval
			
			! *For the third part, follow-through*
			If their calculation in the second part for $x = 3.5$ was too small, accept $x = 3.6, 3.7, 3.75, 3.8$ or 3.9 alongside an explanation comparable with those given in the mark scheme

Paper 2

Q.	Mark	Correct response	Additional guidance
11	1m	105 ± 1 then 80 ± 1 	
	1m (U1)	150 ± 1	
12		Describes the key features of the information **2m** are available, one from each of the categories A and B below:	
	1m	**Category A** States that the rate the mass of the dog increases slows as it gets older eg • They get heavier in their first few months but as they get older their weight doesn't go up as much	✓ *Minimally acceptable explanation* eg, for category A • Grows quickly then more slowly • After a few months the amount it increases by gets smaller [accept any value from 4 – 8 months inclusive within this type of response] • They start by gaining about 5kg per month but this gets less and less eg, for category B • Doesn't get any fatter after it is a year old • They stop at 12 months • At 6 months, it's more than half-sized eg, for both categories (ie 2m) • It grows quickly then slowly until 12 months when it stops
	1m	**Category B** Makes an observation that links the information in the bar chart to the adult mass eg • It reaches adult size after the first year • A dog is about half grown when it is 4 months old	! *Values given* As this question is assessing understanding of information presented graphically, condone incorrect numbers for category A, but do not accept for category B eg, for category A, accept • They increase by about 10kg per month but not as much as they get older eg, for category B, do not accept • A dog is about half grown after half a year
	(U1)		✗ *Incomplete explanation* eg, for category A • Dogs get heavier as they get older [doesn't say how rate of change alters] eg, for category B • A German Shepherd stops growing when it reaches 35kg [no link to 12 months] • It grows quickly then slowly until 12 months [gains category A mark but no link to full weight being reached for category B]

Optional level 6 tests – Mathematics mark schemes

Level threshold information

This section provides information about interpreting the scores from the Optonal level 6 tests in mathematics.

In order to make use of the information in this section, you should administer the tests according to the guidance given in the test administrators' guide. The guide can be downloaded from the NCA Tools website at: www.qcda.gov.uk/ncatools. It is particularly important that you observe the time limits given in the test instructions, and mark questions strictly according to the mark scheme. If not, the information derived from this section cannot be used reliably.

The table below gives an indication of the national curriculum level for pupils, based on their score in the test. In order to use this information, the total scores on paper 1 and paper 2 should be added together.

Mathematics test (maximum mark 50)

Score	Outcome
0 - 24 marks	Level 6 not achieved
25 - 50 marks	Level 6 achieved

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Optional level 6 tests | Mathematics mark schemes