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YEAR
7

LEVELS
3–4

2004

2004

QCA

Year 7 progress test in mathematics

Mark scheme for Paper 1, Paper 2 and Mental mathematics

department for
education and skills
creating opportunity, releasing potential, achieving excellence

Introduction

2

The test papers will be marked by external markers. The markers will apply the mark schemes in this booklet, which is provided here to inform teachers.

This booklet contains the mark schemes for Paper 1, Paper 2 and the mental mathematics test. Questions have been named so that each one has a unique identifier.

The structure of the mark schemes

The marking information for questions in the written tests is set out in the form of tables, which start on page 11 (Paper 1) and page 23 (Paper 2) of this booklet. The two columns on the left-hand side of each table provide a quick reference to the question number, question part, and the total number of marks available for that question part.

The **Correct response** column usually includes 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, and whether the marks are independent or cumulative

■ examples of some different types of correct response, including the most common and the minimum acceptable.

The **Additional guidance** column indicates alternative acceptable responses, and provides details of specific types of response that are unacceptable. Other guidance, such as when 'follow through' is allowed, is provided as necessary.

Questions with a *Using and applying mathematics* element are identified in the mark scheme by an encircled U with a number that indicates the significance of using and applying mathematics in answering the question. The U number can be any whole number from 1 to the number of marks in the question.

General guidance

Using the mark schemes

Answers that are numerically equivalent or algebraically equivalent are acceptable unless the mark schemes state otherwise.

In order to ensure consistency of marking, the most frequent procedural queries are listed on the following two pages with the prescribed correct action. This is followed by further guidance, relating to marking of questions that involve money, time, algebra, coordinates or negative numbers. Unless otherwise specified in the mark schemes, markers should apply the following guidelines in all cases.

What if ...

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 requirements given in the **Correct response** column. Refer also to the **Additional guidance** column.
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, is acceptable. Provided there is no ambiguity, condone the continental practice of using a comma for a decimal point.
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 digit from the larger in calculations such as $45 - 26$ to give the answer 21; incorrect signs when working with negative numbers.
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's answer correctly follows through from earlier incorrect work.	Follow through marks may be awarded only when specifically stated in the mark schemes, 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.
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. If the original intention or difficulty level of the question is not reduced, deduct one mark only. If the original intention or difficulty level is reduced, do not award any marks for the question part.
The correct answer is in the wrong place.	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 final answer is wrong but the correct answer is shown in the working.	Where appropriate, detailed guidance will be given in the mark schemes, and must be adhered to. 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, award the mark.
	in questions not testing accuracy, the correct answer has been given but then rounded or truncated	If so, award the mark.
	the pupil has continued to give redundant extra working which does not contradict work already done	If so, award the mark.
	the pupil has continued, in the same part of the question, to give redundant extra working which does contradict work already done.	If so, do not award the mark. Where a question part carries more than one mark, only the final mark should be withheld.
The pupil's answer is correct but the wrong working is seen.	A correct response should always be marked as correct, unless the mark scheme state otherwise.	
The correct response has been crossed (or rubbed) out and not replaced.	Mark, according to the mark schemes, any legible crossed (or rubbed) out work that has not been replaced.	
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 should be awarded unless prohibited by the mark schemes. If both correct and incorrect responses are given, no mark should be awarded.	
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 schemes specifically state otherwise.	

Marking specific types of question

Responses involving money

For example: £3.20   £7

Accept ✓	Do not accept ✗

✓ Any unambiguous indication of the correct amount
    eg   £3.20(p), £3 20, £3,20,
        3 pounds 20, £3-20,
        £3 20 pence, £3:20,
        £7.00
 	
✓ The £ sign is usually already printed in the answer space. Where the pupil writes an answer other than in the answer space, or crosses out the £ sign, accept an answer with correct units in pounds and/or pence
    eg   320p
        700p
	✗ Incorrect or ambiguous use of pounds or pence
	    eg £320, £320p or £700p,
	        or 3.20 or 3.20p not in
	        the answer space
	
	✗ Incorrect placement of decimal points, spaces, etc or incorrect use or omission of 0
	    eg £3.2, £3 200, £32 0,
	        £3-2-0,
	        £7.0

Responses involving time

A time interval   For example: 2 hours 30 mins

Accept ✓	Take care ! Do not accept ✗

✓ Any unambiguous indication
    eg   2.5 (hours), 2h 30
 	
✓ Digital electronic time
    ie   2:30
	✗ Incorrect or ambiguous time interval
	    eg 2.3(h), 2.30, 2-30, 2h 3,
	        2.30min
	
	! The time unit, hours or minutes, is usually printed in the answer space. Where the pupil writes an answer other than in the answer space, or crosses out the given unit, accept an answer with correct units in hours or minutes, unless the question has asked for a specific unit to be used

A specific time   For example: 8.40am   17:20

Accept ✓	Do not accept ✗

✓ Any unambiguous, correct indication
    eg   08.40, 8.40, 8:40, 0840, 8 40,
        8-40, twenty to nine,
        8,40
 	
✓ Unambiguous change to 12 or 24 hour clock
    eg   17:20 as 5:20pm, 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, 084, 84

Responses involving the use of algebra

For example: $2 + n$ $n + 2$ $2n$ $\dfrac{n}{2}$ n^2

Accept ✓	Take care ! Do not accept ✗

✓ 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 part 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 $n + 2$

Responses involving coordinates
For example: (5, 7)

Accept ✓	**Do not accept ✗**

✓ 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 negative numbers
For example: −2

Accept ✓	**Do not accept ✗**
	To avoid penalising the error below more than once within each question, do not award the mark for the *first* occurrence of the error within each question. Where a question part carries more than one mark, only the final mark should be withheld ✗ Incorrect notation eg 2−

Recording marks awarded on the test paper

All questions, even those not attempted by the pupil, will be marked with a 1 or a 0 entered in each marking space. Where 2m can be split into 1m gained and 1m lost, with no explicit order, then this will be recorded by the marker as 1

0

The total marks awarded for a double page will be written in the box at the bottom of the right-hand page, and the total number of marks obtained on the paper will be recorded on the front of the test paper.

A total of 100 marks is available (40 from Paper 1, 40 from Paper 2 and 20 from the mental mathematics test).

Awarding levels

The sum of the marks gained on Paper 1, Paper 2 and the mental mathematics paper determines the level awarded. Level threshold tables, which show the mark ranges for the award of different levels, will be available on the QCA website *www.qca.org.uk* from 21 June 2004. QCA will also send a copy to each school by 2 July 2004.

Schools will be notified of pupils' results by means of a marksheet, which will be returned to schools by the external marking agency with the pupils' marked scripts. The marksheet will include pupils' scores on the test papers and the levels awarded.

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Mark scheme for Paper 1

Question				**100**
1			**Correct response**	**Additional guidance**
	2m		Indicates all correct pairs, ie	✓ *Unambiguous indication* ! *Any number joined to more than one other* Do not accept as part of a correct pair
	or **1m**		Indicates at least two correct pairs	

Question			Speed limits
2		**Correct response**	**Additional guidance**
a	**1m**	50	
b	**1m**	10	

Question			Number grid
3		**Correct response**	**Additional guidance**
	1m	Gives all three correct values, ie	

852	853	**854**
842	**843**	844
832	833	834

Question			Total of 50
4		**Correct response**	**Additional guidance**
a	**1m**	24	
b	**1m** (U1)	Gives any two numbers that add to 34 eg ■ 17, 17 ■ 14, 20 ■ 1, 33	✓ *Fractions, decimals, a negative number or zero* ✗ *Blank for zero*

Question			Properties of shape	
5		**Correct response**		**Additional guidance**
	2m	Makes all four correct decisions, ie True False ✓ ☐ ☐ ✓ ☐ ✓ ✓ ☐		**!** *Other indication* Accept any unambiguous indication but do not accept blanks for false
	or **1m**	Makes three correct decisions		

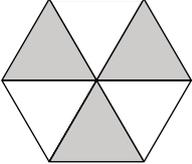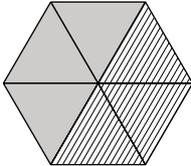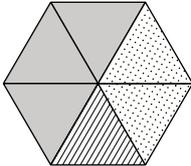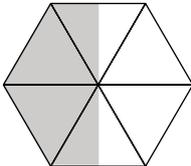| Question			Number chains	
6		**Correct response**		**Additional guidance**
a	**1m**	Gives both correct numbers in the correct order, ie 13 and 16		
	1m	Gives both correct numbers in the correct order, ie 16 and 32		
b	**1m**	States or implies that the rule is subtract 4 eg ■ Minus four ■ −4 ■ Take away 4 ■ 4 less ■ 4 smaller		**✓** *Minimally acceptable rule* eg ◆ Count down 4 ◆ Down in 4s ◆ Go backwards 4 **✗** *Incomplete rule or incorrect notation* eg ◆ 4 ◆ Subtract ◆ 4−
	1m	0		**!** *Follow through from their rule for the first mark* Accept provided their rule was generalised eg, from their rule as 'halve' accept ◆ 2 eg, from their rule as '4' do not accept ◆ 4

Question			**Which shape?**
7		**Correct response**	**Additional guidance**
	1m	Indicates the correct shape, ie	
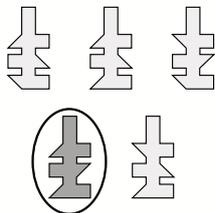
Question			**Survey results**
8		**Correct response**	**Additional guidance**
	2m	Draws the results for both tennis and cricket correctly, ie	**!** *Circles not drawn accurately or not shaded* Accept provided the pupil's intention is clear
			! *Symbols other than circles used* Provided the number of symbols is clearly intended to represent 2 for tennis and 3 for cricket, withhold only one mark eg, for one mark accept
	or **1m**	Draws the result for either tennis or cricket correctly	
		or	
		Draws an incorrect number of circles for tennis but then follows through to give their correct number of circles for cricket eg	
	(U1)	■ 3 circles for tennis, 4.5 circles for cricket ■ 6 circles for tennis, 9 circles for cricket ■ 1 circle for tennis, $1\frac{1}{2}$ circles for cricket	

Question		Balancing	
9		**Correct response**	**Additional guidance**
	1m (U1)	4	
	1m	6	✓ *Follow through as their first mark + 2*

Question		School timetable	
10		**Correct response**	**Additional guidance**
a	**1m**	45	
b	**1m**	20	
c	**1m**	7	

Question			Missing numbers
11		**Correct response**	**Additional guidance**
	1m	6.2	✓ *Equivalent fractions or decimals*
	1m	1.1	

Question			Spinners
12		**Correct response**	**Additional guidance**
	1m	Indicates half of the spinner eg ■ 	**!** *Other half not left blank* Accept provided unambiguous eg, accept ♦ eg, do not accept ♦ **!** *Parts of triangles shaded* Accept provided the pupil's intention to shade half of the spinner is clear eg, accept ♦

Question		Charity	
13		**Correct response**	**Additional guidance**
a	**1m**	40	
b	**1m**	Indicates on the diagram the amount £850 eg ■ 	**!** *Indication not accurate or diagram not shaded* Accept provided the pupil's intention is clear **!** *Unconventional indication of half a square* Accept provided unambiguous eg, for half a square accept ◆
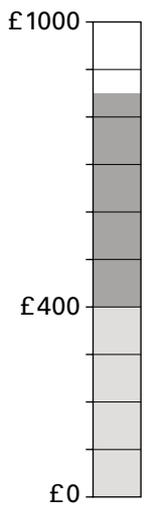
Question			Net
14		**Correct response**	**Additional guidance**
	1m	Indicates the correct face eg ■ _base_ lid	✓ _Unambiguous indication_
	1m	Indicates the correct face eg ■ _base_ lid	
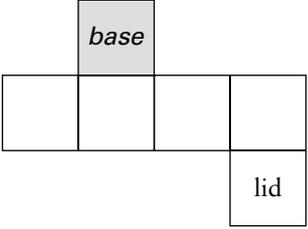
Question		Two numbers	
15		**Correct response**	**Additional guidance**
	1m (U1)	3 and 8, either order	

Question		Which is bigger?	
16		**Correct response**	**Additional guidance**
	1m	Indicates all three correct numbers, ie (1001) 999 (3) −5 (4) 3.9 2.72 (2.8)	

Question			**Patterns**
17		**Correct response**	**Additional guidance**

a	1m	Gives a correct pattern
		eg
		  ■ Add 9
		  ■ + 9
		  ■ Subtract 9
		  ■ Difference of 9
			✓ *Minimally acceptable pattern*
			eg
			  ◆ Up in 9s
			  ◆ Down in 9s
			  ◆ Take 9
			  ◆ 26 + 9 = 35
			    35 + 9 = 44
			    44 + 9 = 53
			
			✓ *Two or more steps*
			eg
			  ◆ Add 10 subtract 1
			
			✘ *Incomplete pattern or incorrect notation*
			eg
			  ◆ 9
			  ◆ Add
			  ◆ 9−
			
			✘ *Separate patterns for tens and units*
			eg
			  ◆ Units − 1, tens + 1

b	1m	Joins four numbers vertically aligned	✓ *Any unambiguous indication, including more than one correct set joined*

Question			**Missing fractions**
18		**Correct response**	**Additional guidance**
	1m	$\frac{1}{4}$ or equivalent fraction	✓ *Decimal fraction*

Question			**Triangles**
19		**Correct response**	**Additional guidance**
	1m	8	**!** *Triangles indicated on diagram* Ignore
			! *Answer of 8cm (or 8cm²)* As this could result from adding the given dimensions, do not accept unless the 8 is supported by further working eg, accept
(U1)			Answer: 8cm

Question			**Long jump**
20		**Correct response**	**Additional guidance**
a	**1m**	3.96 or equivalent	
b	**1m**	0.2 or equivalent	
	1m	20	**!** *Follow through* Accept follow through as their first mark in part (b) × 100, provided their first mark is not an integer

Question			**Chocolate**
21		**Correct response**	**Additional guidance**
	1m	5 p	
	1m	1972	✓ *Unambiguous indication of year* eg, for the second mark • 72
	1m	1997 and 2002, either order	

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Mark scheme for Paper 2

Question			Beads
1		**Correct response**	**Additional guidance**
	1m	24	✖ *Incomplete processing* eg ◆ 2 × 12 ◆ 12 + 12

Question			Missing numbers
2		**Correct response**	**Additional guidance**
	1m	234	
	1m	351	
	1m	34	

Question			**Teachers**
3		Correct response	Additional guidance
	1m	Dr Rawley	✓ *Unambiguous indication* eg ◆ Dr R ◆ Dr

Question			**Coins**
4		Correct response	Additional guidance
a	**1m** U1	Gives the values of four coins that sum to 25p, in any order eg ■ 20p, 2p, 2p, 1p ■ 10p, 5p, 5p, 5p	! *Units omitted* Condone
b	**1m** U1	Gives the values of five coins that sum to £1.25, but do not include £1, ie 50p, 50p, 10p, 10p, 5p, in any order	

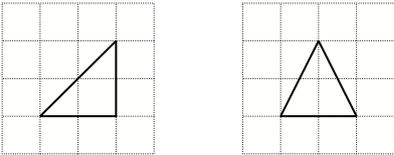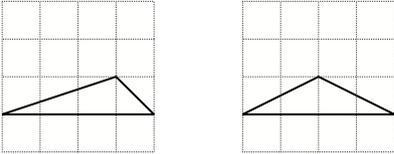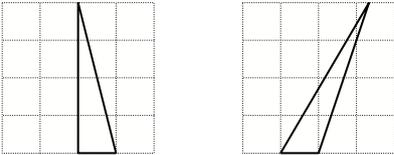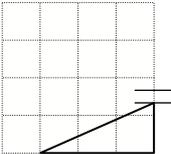| Question			**Baby**
5		Correct response	Additional guidance
a	**1m**	Indicates only 3kg, ie ☐ ✓ ☐ ☐	
b	**1m**	Indicates only 300 millilitres, ie ☐ ✓ ☐ ☐	

Question			**Sales**
6		Correct response	Additional guidance
a	**1m**	8	

b	**1m**	10	**!** *Reference to money left over*
			Do not accept fractions of vests
			eg
			    ◆ 10.05
			However, accept reference to a remainder, even if incorrect
			eg
			    ◆ 10 with 10p change
			    ◆ 10 r1

c	**2m**
	
	or
	1m
		£ 11.02
		
		Shows the digits 1102
		
		or
		
		Shows the digits 898
		
		or
		
		Shows a complete correct method with not more than one error
		eg
		    ■ 2 × 2.5 + 2 × 1.99 then subtract from 20
		    ■ 20 − (5 + 3.98)
		    ■ 2 × 2.5 = 5
		       2 × 1.99 = 2.99 *(error)*
		       20 − (2.99 + 5) = £ 12.01
		
		or
		
		The only error is to use only one T-shirt and one vest
		eg
		    ■ £ 15.51
			! *For 1m, necessary brackets omitted*
			As this is a level 4 mark, condone
			eg, accept
			    ◆ 20 − 5 + 3.98

Question		Dice sum	
7		**Correct response**	**Additional guidance**
	1m	Indicates only the values 20 and 1, ie 12 5 (20) 8 (1)	

Question		Place value	
8		**Correct response**	**Additional guidance**
	1m	Tenths	✘ *Answer not in words* eg ◆ 10ths

Question		Area	
9		**Correct response**	**Additional guidance**
a	**1m**	Gives a correct explanation eg ■ It has six sides ■ It has 6 angles ■ It has 6 corners	✓ *Minimally acceptable explanation* eg ◆ 6 edges ◆ 6 lines ◆ 6 points ◆ 6 faces ✘ *Incomplete explanation* eg ◆ 6
b	**1m**	7.5 or equivalent	✘ *Incorrect notation* eg ◆ $7.\frac{1}{2}$

Question			Area (cont)
9		**Correct response**	**Additional guidance**
c	**1m**	Draws a triangle with an area of 2cm²	! *Lines not ruled or accurate* Accept provided the pupil's intention is clear
		The most common correct drawings:	
		Have integer values for both the base and perpendicular height eg, for base 2, perpendicular height 2	! *Base or perpendicular height not accurate* Accept provided the pupil's intention is clear
		▪	
		eg, for base 4, perpendicular height 1	
		▪	
		eg, for base 1, perpendicular height 4	
		▪	
		Have the base, or the perpendicular height, or both, as a non-integer value, but supporting working shows this is deliberate eg, for base 3, perpendicular height $1\frac{1}{3}$	
		▪	
		eg, for base 2.5, perpendicular height 1.6	
		▪ 2.5 and 1.6 seen	

Question				Equations
10		**Correct response**		**Additional guidance**
	1m	12		**!** *Embedded value or incorrect notation*
				eg
				◆ *a* = 12 + 12 = 24
	1m	36		*b* = 36 − 12 = 24
				Penalise only the first occurrence

Question				Ribbon
11		**Correct response**		**Additional guidance**
a	1m	4		
b	1m	£ 1.40		

Question				America
12		**Correct response**		**Additional guidance**
a	1m	701		
b	1m	Seattle and New York, either order		✓ *Unambiguous indication*
				eg
				◆ S and NY
c	1m	364.8 or equivalent		✓ *Answer of 364 or 365*

Question				Angle sizing
13		**Correct response**		**Additional guidance**
a	1m	Indicates angle *b*		**!** *Angle measured*
				Accept an answer of 30 ± 2°

Question				
			Angle sizing (cont)	
13		**Correct response**	**Additional guidance**	
b	**1m**	Indicates No and gives a correct explanation	**!** *Incorrect units* Condone	

The most common correct explanations:

Qualify why the angles are the same size

eg, by referring to the amount of turn
- Both turn the same amount

eg, by measuring (accept 45 ± 2°)
- Both are 45°

eg, by referring to transformation
- If you flip the first one, it fits onto the second one exactly

eg, by referring to enlargement
- They are the same diagram but one has shrunk
- If you extend both lines on the first diagram across one square, you get the same picture as the second

✓ *Minimally acceptable explanation*
eg
- Same turn
- Markers are the same size
- I measured
- They fit on top of each other
- I used tracing paper
- Both go through the diagonal
- Angles same, triangles different

✗ *Incomplete explanation*
eg
- Same corners
- Same angles
- Same size
- They fit
- Same picture
- Same size as boxes on the grid
- Same distance between the lines
- Same number of squares

Address the misconception by explaining that the lengths of the arms are irrelevant
eg
- Just because the arms are longer it doesn't make it bigger
- Just because one picture is smaller doesn't mean the angle is smaller

✓ *Minimally acceptable explanation*
eg
- It's just that the lines are longer
- It's just because the lines are different
- He only thinks that because the line is longer
- The second diagram is one square bigger
- It just goes through one extra square

! *Explanation does not state that it is referring to a misconception*
Condone
eg, accept
- The lines are longer
- Different sizes

Address the misconception by referring to transformation or enlargement, but focusing on what is different
eg
- It's just that it's the other way round
- It's just that the angle is turned round
- It's just that one is stretched
- It's just that one is smaller
- It's just that one is bigger
- It's just that the shapes are different

✓ *Minimally acceptable explanation*
eg
- It's just that they are different sizes

✗ *Incomplete explanation*
eg
- It's the lines
- One is small

U1

29

Question		Correct response		Additional guidance	3.5
14					
a	**1m**	50			
b	**1m**	30			
c	**1m**	50			

Question			Restaurant	
15			**Correct response**	**Additional guidance**
a	1m		£ 179.40	
b	2m *or* 1m ⃝U1		5 Shows the digits 3225 or Shows the value 2.5 or 4.5, or equivalent or Shows or implies a complete correct method with not more than one error, even if their final answer is not an integer, or is rounded or truncated eg ■ 12.90 + 12.90 + 6.45 + 6.45 + 6.45 + 6.45 + 6.45 = 58.05 ■ 12.90 × 2 = 25.80, 58.05 − 25.80 = 23.75 *(error)* 23.75 ÷ 6.45 = 3.68 so 3	

Question			School bags	
16			**Correct response**	**Additional guidance**
a	1m		Draws a bar on the chart to indicate 2.5 kg, aligned with Rita's name, ie 	**!** *Bar not shaded, or not of correct width, or not ruled or accurate* Accept provided the pupil's intention is clear
b	1m		11	
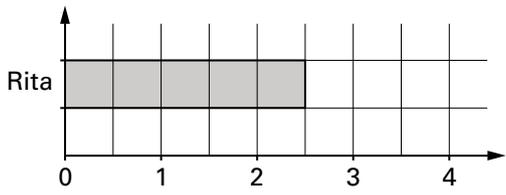
Question			**Turning**	
17		**Correct response**		**Additional guidance**

	2m	Makes all four correct decisions, ie
		
		✗ ✓
		....
		
		✓ ✗
		....
		
		or
		1m
			Makes three correct decisions
			
			or
			
			Indicates the two shapes that do look the same but makes no decision for the other two shapes, ie
			
			            ✓
			....
			
			✓
			....
				! *Indication other than ✓ and ✗ used*
				Accept provided unambiguous
				eg, accept
				  • Y for ✓, N for ✗
				eg, do not accept
				  • Blank for ✗

Question			Questionnaire	
		Correct response	**Additional guidance**	
18				
a	1m	Gives a correct explanation eg • She is 18 and that's neither less than 18 nor more than 18 • 18 isn't less than 18 or more than 18 • It says more than or less than 18 but not 18 • Alice is in the middle • 18 is in between • She is over less than and under more than • It should say 18 or more Ⓤ1	✓ *Minimally acceptable explanation* eg ♦ She's not less than or more than 18 ♦ She's neither of them ♦ She's exactly 18 ♦ There's no box to tick for 18 ✗ *Incomplete explanation* eg ♦ It says less than 18 and more than 18 ♦ It doesn't say 18 ♦ Because she is 18 ♦ She can't tick either box	
b	1m	Gives a correct phrase that describes all ages that are 18 or over eg • 18 or more than 18 years old • 18 years old or more • 18 + • Not less than 18 years old • More than 17	✓ *Minimally acceptable phrase* eg ♦ Greater than or the same (18 implied) ♦ Adult ♦ Other ✗ *Non-distinct category* eg ♦ 17 years or more	

Rectangles

Question		Correct response	Additional guidance
19	**1m**	Indicates Yes and gives a correct explanation The most common correct explanations: Show that the fraction is $\frac{1}{3}$ for both rectangles eg - First rectangle has 6 squares, $\frac{1}{3}$ of 6 = 2 Second rectangle has 12 squares, $\frac{1}{3}$ of 12 = 4 2 is a third of 6, 4 is a third of 12 6 ÷ 3 = 2 and 12 ÷ 3 = 4 Use equivalent fractions eg $\frac{2}{6} = \frac{4}{12}$ $\frac{1}{3} = \frac{2}{6}$ Reason spatially eg - The 2nd rectangle is twice the area of the 1st, so twice as much should be shaded and it is - Double 6 is 12, double 2 is 4	✓ *Minimally acceptable explanation* eg $\frac{1}{3}$ - Both divided by 3 ✓ *Minimally acceptable explanation* eg - One is 2 out of 6 and the other is 4 out of 12 ✓ *Minimally acceptable explanation* eg - Three shaded bits fit in each rectangle - You can get two more shaded bits in each ! *Incorrect description of units of area* Condone eg, accept - First is one square out of 3, second is two squares out of 6 ✗ *Incomplete explanation* eg - In the first there are 2 shaded and in the second there are 4 shaded - The second rectangle is twice the area of the first - The bigger one has twice as much shaded - The second is double the first - The same proportion is shaded in each

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Year 7 progress test in mathematics 2004

Mental mathematics

Mark scheme

Time: 10 seconds

7	**21** days	

8	**1**	Accept responses in words or on the shape, provided unambiguous

9	**2 (:00) pm**	Do not accept unless pm is shown Do not accept equivalent presentations, eg 14:00

10	**40**	

11	**(5 , 3)**	

Time: 5 seconds

1	**806**	Do not accept responses given in words

2	**600** m	

3	**32**	

4	**38**	Accept embedded value, eg 62 + 38 = 100

5	**200**	

6	**3.5**	Accept equivalent fractions or decimals

Time: 10 seconds (continued)

12	**14** cm	

13	**9**	

14	**6** cm^2	

Time: 15 seconds
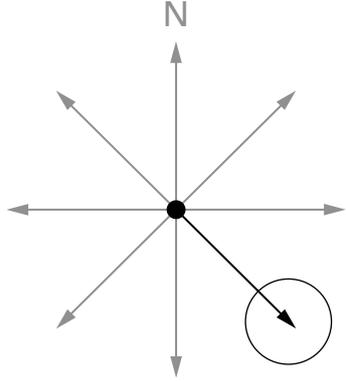
15	
	Accept any unambiguous indication

16	**60**	

17	**17** minutes	

18	**25**	Accept embedded value, eg 3 × 25

19	**16**	Do not accept incomplete processing eg 18 − 2

20	**12** pupils	

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EARLY YEARS

NATIONAL CURRICULUM 5–16

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NVQ

OTHER VOCATIONAL QUALIFICATIONS