OCR
Oxford Cambridge and RSA

Foundation

GCSE

Mathematics - Paper 1

J560/01: Paper 1 (Foundation tier)

General Certificate of Secondary Education

Mark Scheme for November 2023

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

MARKING INSTRUCTIONS

1. **PREPARATION FOR MARKING** Make sure that you have accessed and completed the relevant training packages for on-screen marking: *RM Assessor Online Training*; *OCR Essential Guide to Marking*.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are available in RM Assessor.

3. Log-in to RM Assessor then mark and annotate the **required number** of practice responses ("scripts") and the **required number** of standardisation responses.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the RM Assessor 50% and 100% deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader via the RM Assessor messaging system.

5. Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners should give candidates the benefit of the doubt and mark the crossed out response where legible.

6. When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

7. On each blank page the annotation **BP** must be inserted to confirm that the page has been checked. For additional objects (if present), a tick must be inserted on each page to confirm that it has been checked.

8. There is a NR (No Response) option. Award NR (No Response)
   - if there is nothing written at all in the answer space
   - OR if there is a comment which does not in any way relate to the question (e.g. 'can't do', 'don't know')
   - OR if there is a mark (e.g. a dash, a question mark) which is not an attempt at the question.

   The hash key (#) on your keyboard will enter NR.

   Note: Award 0 marks for an attempt that earns no credit (including copying out the question).

9. The RM Assessor **comments box** is used by the Principal Examiner or your Team Leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**

   If you have any questions or comments for your Team Leader, use the RM Assessor messaging system.

10. Assistant Examiners should send a brief report on the performance of candidates to their Team Leader (Supervisor) by the end of the marking period. Please follow the direction of your Team Leader about which questions you should report on and how to submit your report. Your report should contain notes on particular strengths displayed as well as common errors or weaknesses.

11. Annotations available in RM Assessor. These **must** be used whenever appropriate during your marking.

Annotation	Meaning
	Correct
	Incorrect
BOD	Benefit of doubt
FT	Follow through
ISW	Ignore subsequent working (after correct answer obtained), provided method has been completed
M0	Method mark awarded 0
M1	Method mark awarded 1
M2	Method mark awarded 2
A1	Accuracy mark awarded 1

Annotation	Meaning
B1	Independent mark awarded 1
B2	Independent mark awarded 2
MR	Misread
SC	Special case
^	Omission sign
BP	Blank page
SEEN	Seen

For a response awarded zero (or full) marks a single appropriate annotation (cross, tick, M0 or ^) is sufficient, but not required.
For responses that are not awarded either 0 or full marks, you must make it clear how you have arrived at the mark you have awarded and all responses must have enough annotation for a reviewer to decide if the mark awarded is correct without having to mark it independently.

It is vital that you annotate standardisation scripts fully to show how the marks have been awarded.

Subject-Specific Marking Instructions

12. **M** marks are for using a correct method and are not lost for purely numerical errors.
A marks are for an accurate answer and depend on preceding **M** (method) marks. Therefore **M0 A1** cannot be awarded.
B marks are independent of **M** (method) marks and are for a correct final answer, a partially correct answer, or a correct intermediate stage.
SC marks are for special cases that are worthy of some credit.

13. The following abbreviations are commonly found in GCSE Mathematics mark schemes.

- **figs 237**, for example, means any answer with only these digits. You should ignore leading or trailing zeros and any decimal point e.g. 237000, 2.37, 2.370, 0.00237 would be acceptable but 23070 or 2374 would not.
- **isw** means **ignore subsequent working** after correct answer obtained and applies as a default.
- **nfww** means **not from wrong working**.
- **oe** means **or equivalent**.
- **rot** means **rounded or truncated**.
- **soi** means **seen or implied**.
- **dep** means that the marks are **dependent** on the marks indicated. You must check that the candidate has met all the criteria specified for the mark to be awarded.
- **with correct working** means that full marks **must not** be awarded without some working. The required minimum amount of working will be defined in the guidance column and **SC** marks given for unsupported answers.

14. Anything in the mark scheme which is in square brackets […] is not required for the mark to be earned, but if present it must be correct.

15. Unless the command word requires that working is shown and the working required is stated in the mark scheme, then if the correct answer is clearly given and is not from wrong working **full marks** should be awarded.

Do not award the marks if the answer was obtained from an incorrect method, i.e. incorrect working is seen and the correct answer clearly follows from it.

16. Where follow through (**FT**) is indicated in the mark scheme, marks can be awarded where the candidate's work follows correctly from a previous answer whether or not it was correct. For questions with FT available you must ensure that you refer back to the relevant previous answer. You may find it easier to mark these questions candidate by candidate rather than question by question.

    Figures or expressions that are being followed through are sometimes encompassed by single quotation marks after the word *their* for clarity, e.g. FT 180 × (*their* '37' + 16), or FT 300 – √(*their* '52 + 72'). Answers to part questions which are being followed through are indicated by e.g. FT 3 × *their* (a).

17. In questions **with no final answer line**, make no deductions for wrong work after an acceptable answer (i.e. **isw**) unless the mark scheme says otherwise, indicated by the instruction 'mark final answer'.

18. In questions **with a final answer line and incorrect answer given**:

    (i) If the correct answer is seen in the body of working and the answer given on the answer line is a clear transcription error allow full marks unless the mark scheme says 'mark final answer'. Place the annotation ✓ next to the correct answer.

    (ii) If the correct answer is seen in the body of working but the answer line is blank, allow full marks. Place the annotation ✓ next to the correct answer.

    (iii) If the correct answer is seen in the body of working but a completely different answer is seen on the answer line, then accuracy marks for the answer are lost. Method marks could still be awarded if there is no other method leading to the incorrect answer. Use the **M0**, **M1**, **M2** annotations as appropriate and place the annotation **×** next to the wrong answer.

19. In questions **with a final answer line**:

    (i) If one answer is provided on the answer line, mark the method that leads to that answer. A correct step, value or statement that is not part of the method that leads to the given answer should be awarded **M0** and/or **B0**.

    (ii) If more than one answer is provided on the answer line and there is a single method provided, award method marks only.

    (iii) If more than one answer is provided on the answer line and there is more than one method provided, award marks for the poorer response unless the candidate has clearly indicated which method is to be marked.

20. In questions with **no final answer line**:

(i) If a single response is provided, mark as usual.

(ii) If more than one response is provided, award marks for the poorer response unless the candidate has clearly indicated which response is to be marked.

21. When the data of a question is consistently misread in such a way as not to alter the nature or difficulty of the question, please follow the candidate's work and allow follow through for **A** and **B** marks. Deduct 1 mark from any **A** or **B** marks earned and record this by using the **MR** annotation. **M** marks are not deducted for misreads. If a candidate corrects the misread in a later part, do not continue to follow through, but award **A** and **B** marks for the correct answer only.

22. Unless the question asks for an answer to a specific degree of accuracy, always mark at the greatest number of significant figures even if this is rounded or truncated on the answer line. For example, an answer in the mark scheme is 15.75, which is seen in the working. The candidate then rounds or truncates this to 15.8, 15 or 16 on the answer line. Allow full marks for the 15.75.

23. Ranges of answers given in the mark scheme are always inclusive.

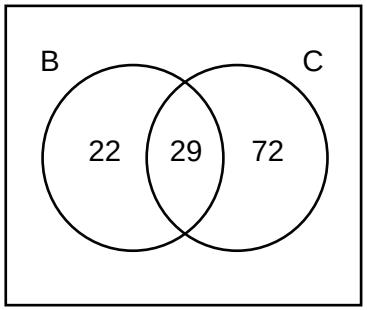
24. For methods not provided for in the mark scheme give as far as possible equivalent marks for equivalent work. If in doubt, consult your Team Leader.

25. If in any case the mark scheme operates with considerable unfairness consult your Team Leader.

Question			Answer	Marks	Part marks and guidance	
1	(a)		Pyramid	1		If answer line blank check the box for indication
	(b)		Pentagon	1		
	(c)		Sketch of a rectangle	1		Correct by eye Condone diagonals drawn Must be completely on grid
2	(a)		3600	1		
	(b)		[£] 3.29	1		Condone 329p but not £329p or £3.29p Do not condone extra zeros
3	(a)		$\frac{3}{5}$ or equivalent fraction	1		
	(b)		Three squares shaded	1		Accept any clear indication
4	(a)		1 5 25	2	**B1** for 5 and **B1** for 1 and 25	Allow B1 for one correct factor pair Treat incorrect extra(s) as choice
	(b)		49 or 64	1		If more than one both must be correct Not 7^2 or 8^2
5			5.1	2	**M1** for (4.2 + 6) ÷ 2 or 4.2 + (6 – 4.2) ÷ 2 oe or complete number line from 4.2 to 6 with indication of working towards the middle value	May be done in parts
6			106	2	**M1** for 360 – (90 + 39 + 125) oe	
7			600	3	**M1** for a correct conversion of litres to millilitres **M1** for figs 15 ÷ (2 + 3) [×2] If **0** scored **SC1** for answer 600 : 900 or for answer figs 6	eg **M1** implied by 1500 with no further conversions

Question			Answer	Marks	Part marks and guidance	
8			4 [cm]	**3**	**M2** for 240 ÷ (12 × 5) or **M1** for 12 × 5 × *x* [= 240] may be implied by 60*x*.	May be done in stages
9			6 hours 15 minutes	**4**	**B3** for 6.25 oe or for answer 6 h 25 min OR **M2** for 6 × 50 ÷ 48 or **M1** for 6 × 50 may be implied by 300	
10	**(a)**		7	**3**	**M2** for $70 \times \frac{24}{16} \div 15$ oe or **M1** for $70 \times \frac{24}{16}$ oe may be implied by 105 or for $70 \div 15$ may be implied by 4.66 to 4.7	May be done in stages Do not award 3 for answer 7 from rounded values

	(b)		40 with correct working	**4**	**M1** for 240 ÷ 80 implied by 3 **M1** for 1000 ÷ 400 implied by 2.5 AND **M1** for 16 × *their* 2.5 or 16 × *their* 3 OR **M1** for 80 ÷ 16 implied by 5 **M1** for 400 ÷ 16 implied by 25 AND **M1** for 1000 ÷ *their* 25 or 240 ÷ *their* 5 OR **M3** for 240g [of sultanas] = 48 [scones] and 1000g [of flour] = 40 [scones] OR **M3** for 200g [of sultanas] = 40[scones] and 1000g [of flour] = 40 [scones] OR **M2** for 240g [of sultanas] = 48 [scones] and 1200g [of flour] = 48 [scones] If **0** or **1** scored, instead award **SC2** for answer 40 with no or insufficient working	Correct working requires at least the first two **M1** marks Must have a comparison of flour and sultanas

Question			Answer	Marks	Part marks and guidance	
11	(a)			1		In this part, condone b(i) misplaced
	(b)	(i)	17	1		
		(ii)	17 in correct place on diagram	1	FT their (b)(i)	Not strict FT as they may have started again
	(c)		$\frac{101}{140}$ oe	2	**FT** $\frac{their\ 72+their\ 29}{140}$ **M1** for *their* 72 + *their* 29 may be implied by 101 *their* 72 + *their* 29 must be <140 for 2 or 1 mark	Accept 0.721 or 72.1% isw an incorrect simplification of their correct probability or incorrect conversion to decimal or percentage Do not accept ratio

Question			Answer	Marks	Part marks and guidance	
12			6 with correct working	5	**M1** for 560 × 0.6 or 560 × 60 **M1** for 916 – 130 or 916 – *their* (560 × 0.6) **M1** for 916 – (130 + *their* (560 × 0.6)) **M1** for (916 – (130 + *their* (560 × 0.6))) ÷ 90	"Correct working" requires evidence of at least **M3** or **M1 M1 M1** *Their* 560 × 0.6 may be 560 × 60 with an attempt to convert to pounds ÷90 may be repeated subtraction or addition
					<u>Trials</u> **M4** for 560 × 0.6 + 5 × 90 + 130 = 916 oe or **M3** for two trials of the form 560 × 0.6 + *n* × 90 + 130 oe seen and correctly evaluated where *n* ≥ 1, *n* ≠ 5 or **M2** for one trial of the form 560 × 0.6 + *n* × 90 + 130 seen and correctly evaluated where *n* ≥ 1, *n* ≠ 5 or **M1** for 560 × 0.6 [+…]	egs for <u>Trial and +90s</u> **M4** for 560 × 0.6 + 3 × 90 + 130 = 736 and 736 + 90 + 90 = 916 **M3** for 560 × 0.6 + 3 × 90 + 130 = 736 and 736 + 90 = 826 **M2** for 560 × 0.6 + 3 × 90 + 130 = 736 **M1** for 560 × 0.6 [+ …] For trials and trials + 90s, accept correct rearrangements that have a target of 786, 580 or 450 rather than 916
					If **0**, **1** or **2** scored, instead award **SC3** for answer 6 with no working or insufficient working If **0** or **1** scored, instead award **SC2** for answer 5 with no working or insufficient working If **0** scored, **SC1** for 450 with no working or insufficient working	

Question			Answer	Marks	Part marks and guidance	
13			46 nfww	**4**	**M1** for 30 + 38 + 52 implied by 120 as total **M1** for [0].85 × *their* 120 may be implied by 102 **M1** for *their* 102 – (24 + 32)	Must see a calculation if not 102. "85% of" is not a calculation
14			B F	**2**	**B1** for each	Accept correct equations
15			7 nfww	**4**	**M3** for $6p - 8$ and *their* $(6 \times 5 + 4)$ correctly used together or $34 + 8 = 6p$ or $(34 + 8) \div 6$ or $6 \times 7 - 8 = 34$ OR **M1** for $6 \times 5 + 4$ may be implied by 34 **M1** for $6p - 8$ or $34 + 8$ or for one correctly evaluated trial	eg an equation with a first step to solve
16	**(a)**		$10a - 5a^2$ final answer	**2**	**B1** for $10a$ or $-5a^2$ in final answer	
	(b)		$x > 0.6$ or $x > \frac{3}{5}$ final answer	**2**	**M1** for $5x > 12 - 9$ oe or for $x + 1.8 > 2.4$ oe or for answer 0.6 oe with or without equality or wrong inequality symbol	

Question			Answer	Marks	Part marks and guidance	
	(c)		$(x + 4)(x + 3)$	**M2**		Condone final bracket missing Accept $(x + 4) = 0$ $(x + 3) = 0$ for M2
					M1 for $(x + a)$ and $(x + b)$ where $ab = 12$ or $a + b = 7$	Allow correctly completed grid with +4 and +3 as headers for M1
			- 4 and - 3	**B1FT**	for correct solutions from *their* quadratic factors	
					If 0 scored **SC1** for answers ±4 and ±3	
17	**(a)**		it has only one factor	**1**		Accept any correct reason see appendix if more than one statement mark the best as long as it is not contradicted or has an incorrect statement
	(b)		1, a, b, ab, a^2, a^2b	**2**	**B1** for at least 3 correct	Ignore repetitions, maximum 6 values, if more than 6 apply choice, condone e.g $a \times a$, $a \times b$ for a^2, ab etc
18	**(a)**		a correct labelled pie chart with ruled lines	**4**	**B3** for a correct unlabelled/incorrectly labelled pie chart with ruled lines OR **B2** for 162, 90 and 108 or for two sectors within tolerance of ± 2° ignore label or **M1** for $\frac{360}{40}$ or 9 OR **B1** for one sector within tolerance ignore label	Correct means three sectors must be within tolerance of ± 2° for **B3** and **4** marks Do not accept frequency alone as labels May be seen in working, alongside table or on pie chart Note : maximum of 3 sectors for **B3, B2** and **B1**

Question			Answer	Marks	Part marks and guidance	
	(b)		The pie charts do not show how many matches were played by each team	**1**		Accept any correct reason see appendix if more than one statement mark the best as long as it is not contradicted or has an incorrect statement
19	**(a)**		4	**1**		
	(b)		23:04 or 11 04 pm	**4**	**B3** for 64[m] or 1[h] 4[m] OR **M3** for $\frac{48}{45} \times 60$ oe or **M2** for $\frac{48}{45}$ implied by 1.06 to 1.07 or $1\frac{1}{15}$ or $\frac{3}{45} \times 60$ oe implied by 4 or **M1** for $\frac{k}{45}$	Not 11 04 [am] or 11h 4[m]
20	**(a)**		1000*x* oe or *x* kg = 1000*x* oe	**1**		Accept e.g. 1000 × *x* or *x*1000 or *x* × 1000 Do not allow e.g. *x* = 1000*x* or *w* = *x*1000 Ignore units e.g. k and g
	(b)		$\frac{y}{10\,000}$ oe or *y* cm^2 = $\frac{y}{10\,000}$ oe	**1**		Allow e.g. $\frac{y}{100^2}$ or 0.0001*y* or *y* × 10^{-4} or *y* ÷ 10 000 or 0.0001 × *y* or $\frac{1}{10000}y$ Ignore units e.g. m and cm

Question			Answer	Marks	Part marks and guidance	
21	(a)		Eg sin must be ≤ 1 their opp is > than their hyp	1		See appendix
	(b)		53.1[3…]	3	**M2** for $\cos^{-1}\frac{24}{40}$ or **M1** for cos [x] [=] $\frac{24}{40}$ or 0.6	Accept 53 after **M1** or **M2** scored Accept full methods using Pythagoras or sin or tan
22	(a)		0.3 0.2, 0.8, 0.2, 0.8 or 0.2, 0.8, 0.8, 0.2 Does not stop, stops, does not stop	1 1 1		Accept fractions or percentages Diagram must be fully correct for 3 marks
	(b)		0.62	3	**M2** for 0.7 × 0.8 + 0.3 × 0.2 or better or for 1 – (0.7 × 0.2 + 0.3 × 0.8) or better or **M1** for one correct product shown or implied	**FT** for **M1** and **M2** and **3** *their* 0.8, 0.2 and *their* 0.3 (must be less than 1) eg 0.7 × 0.8 or 0.3 × 0.2 or 0.7 × 0.2 or 0.3 × 0.8 soi by 0.56, 0.06, 0.14 or 0.24
23	(a)		Three correct comparable ratios eg $\frac{7}{2.5} = \frac{8.96}{3.2} = \frac{11.2}{4} = 2.8$ or two correct calculations eg $\frac{3.2}{2.5} \times 7 = 8.96$ and $\frac{4}{2.5} \times 7 = 11.2$ Yes, the ratios are the same or Yes, the lengths are correct	M2 1dep	**M1** for 2 comparable ratios or for one correct calculation dependent on **M2** scored	**3** marks for 3 sides (6 values connected), "yes" and reason **M2** for 3 sides (6 values connected) **M1** for 2 sides (4 values connected)

Question			Answer	Marks	Part marks and guidance	
	(b)		No, length of sides is not known	**1**		Allow BOD for No, with a justifiable mathematical reason in relation to the diagram, e.g. angles in a triangle add to 180°
24			[carrots =] 1.23 [potatoes =] 0.78 with correct working	**5**	**B4** for one correct answer with correct working OR **M1** for $2c + 5p = 6.36$ oe **M1** for $3c + 2p = 5.25$ oe **M1** for correct method to equate coefficients of one variable allowing one arithmetic error **M1** for correct method to eliminate one variable allowing one arithmetic error If **0** or **M1** scored award **SC2** for answers 1.23 and 0.78 with no working or insufficient working or if **0** scored **SC1** for two answers which satisfy one of the original conditions	"Correct working" requires evidence of at least **M1 M1 M1** Allow any letter for *c* and *p*, but not carrots or potatoes, and working in pence, answers in pence must have 'p' after, condone £ or pence in equations e.g. $6c+15p = 19.08$ and $6c+4p = 10.50$ or $4c+10p = 12.72$ and $15c+10p = 26.25$ e.g. $11p = 8.58$ or $11c = 13.53$ Note: A sign error is not an arithmetic error if substitution method used **M1** for correctly rearranging equation **M1** for correct substitution into other equation Correct answers from trial and improvement scores **5**

25			27 with correct working	**5**	**M2** for [56 =] 2×2×2×7 oe or better and [64 =] 2×2×2×2×2×2 oe or better or listing the correct multiples of 56 and 64 up to 448 or **M1** for [56 =] 2×2×2 × 7 or better or [64 =] 2×2×2×2×2×2 or listing the next 3 correct multiples of each or one complete list or [LCM =] 448*k* (*k* = 2,3,4 …) **A1** for 448 or $2^6 \times 7$ oe e.g 8 × 8 × 7 and **M1** for 12 463 ÷ *their* 448 If **0, 1** or **2** scored, instead award **SC3** for answer 27 with no working or insufficient working If **0** or **1** scored, instead award **SC2** for answer 27.8… with no working or insufficient working If **0** scored, instead award **SC1** for 448 with no working or insufficient working	"Correct working" requires evidence of at least either **M2** or **M1 M1** Allow factors in e.g. factor trees or tables and allow for **M2** any correct complete method e.g. [56=] 8 x 7 and [64=] 8 x 8 or multiples of 56 up to 448 **and** some indication of dividing these numbers by 64 or with multiples of 64 and dividing by 56 multiples of 56 and 64 are 112, 168, 224, 280, 336, 392, 448 and 128, 192, 256, 320, 384, 448 You might see this: | | 56 | 64 | | 2 | 28 | 32 | | 2 | 14 | 16 | | 2 | 7 | 8 | **M1** may be implied by 27.8… Alternative method : **M2** for an attempt at $\frac{12463}{56} - \frac{12463}{64}$ or **M1** for an attempt at $\frac{12463}{56}$ and an attempt at $\frac{12463}{64}$ AND **B2** for 27.8…. or **B1** for 27 < *their* 27.8 ≤ 28

Question			Answer	Marks	Part marks and guidance	
26			$\pi \times 5^2$	M1		
			their$(\pi \times 5^2) \times \frac{70}{360}$ oe	M1		Accept (78.5 to 78.6) $\times \frac{70}{360}$
			15.26 to 15.284 [rounds to 15.3]	A1		

Exemplar responses for Q17

	Mark
It's a square number and square numbers are not prime	**1 bod**
Its only factor is 1	**1**
It does not have two factors only one	**1**
It can only be 1×1	**1bod**
It only has itself as a factor	**1**
It can only be divided by itself	**1**
Doesn't have exactly 2 factors	**0**
It does not have two factors	**0**
It's a square number	**0**
It's only multiples are 1 and itself	**0**
It only goes into itself	**0**
It only has one prime factor	**0**
There is only 1 ×1 = 1 there are no other factors to make 1 and it's not a whole number (spoilt)	**0**
It does not have two factors that are not 1 or 0	**0**
It has the same factor	**0**
It does not have any factors	**0**

Exemplar responses for Q18b

They may have played less/more matches in total	**1**
We don't know how many games were played	**1**
The pie charts do not show how many matches were played by each team	**1**
B team could have played more games (or less)	**1**
C team may have played more games (or less)	**1**
They could have played a different number of games	**1**
They(C) may have played less matches in total	**1**
Pie charts do not show the actual figures (raw data)	**1**
Pie charts only show proportion	**1**
Bigger fraction might not reflect a bigger quantity	**1**
The numbers in B team may be higher than the numbers in C team (charts are labelled B team and C team)	**1**

No numbers so it could be correct or not we wouldn't know.		**1**
They do not know how many games B played		**0**
They do not know how many games C played		**0**
The total frequency is not given		**0**
The frequency may not be the same for both	(frequency of what?)	**0**
It depends on how many times C wins		**0**
The information (or data) is not shown		**0**
We do not know the exact values		**0**
You can't guarantee everything will be equal		**0**
It might not be accurate		**0**
He can't tell accurately how many games were won		**0**
It depends on how many matches B plays	(doesn't refer to both teams)	**0**
It depends on how many matches C plays	(doesn't refer to both teams)	**0**

Exemplar responses for Q21a

	Mark
The fraction cannot be bigger than 1	**1**
The numerator cannot be bigger than the denominator	**1**
Not using degrees with sin and putting B in the wrong place	**0**
The student must be wrong because the question said so	**0**
That is upside down $\frac{4}{5}$	**0**
It's the wrong calculation	**0**
The fraction cannot be bigger than 1 otherwise it's a reflex angle in a triangle which is not possible	**0**

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on

01223 553998

Alternatively, you can email us on

support@ocr.org.uk

For more information visit

- **ocr.org.uk/qualifications/resource-finder**
- **ocr.org.uk**
- **Twitter/ocrexams**
- **/ocrexams**
- **/company/ocr**
- **/ocrexams**

CAMBRIDGE
UNIVERSITY PRESS & ASSESSMENT

OCR operates academic and vocational qualifications regulated by Ofqual, Qualifications Wales and CCEA as listed in their qualifications registers including A Levels, GCSEs, Cambridge Technicals and Cambridge Nationals.

OCR provides resources to help you deliver our qualifications. These resources do not represent any particular teaching method we expect you to use. We update our resources regularly and aim to make sure content is accurate but please check the OCR website so that you have the most up-to-date version. OCR cannot be held responsible for any errors or omissions in these resources.

Though we make every effort to check our resources, there may be contradictions between published support and the specification, so it is important that you always use information in the latest specification. We indicate any specification changes within the document itself, change the version number and provide a summary of the changes. If you do notice a discrepancy between the specification and a resource, please contact us.

Whether you already offer OCR qualifications, are new to OCR or are thinking about switching, you can request more information using our Expression of Interest form.

Please get in touch if you want to discuss the accessibility of resources we offer to support you in delivering our qualifications.