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CAMBRIDGE
International Education

Cambridge IGCSE™

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/63**

Paper 6 (Extended) **May/June 2026**

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme contains the instructions and marking guidance that our examiners used to mark candidate responses for this component.

Before they start marking, examiners complete a standardisation process. They review a range of candidate responses and discuss the mark scheme in detail to agree which answers can and cannot be accepted. Examiners award marks where it is clear that candidate responses have met the requirements of the mark scheme. These requirements may vary between different components or different versions of the same component, depending on the exact requirements of the question and the candidate responses seen during the standardisation process.

Sometimes, our mark schemes may allow marks to be awarded to responses which contain elements that are factually incorrect or for content not covered by the syllabus. We do this in response to the demands of a specific question to support candidates and make sure that our assessments are fair. However, these allowances should not be used as a guide for teaching and learning.

We cannot discuss the mark scheme with schools, and we recommend that schools read the mark scheme together with the assessment material and the Principal Examiner Report for Teachers.

This document consists of **16** printed pages.

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General marking principles

All examiners must apply these marking principles when marking candidate responses.

1	Examiners must award marks for each response in line with: • the specific **content** defined in the mark scheme • the specific **skills** defined in the mark scheme or in the level descriptions • the **standard of response** required as exemplified by the standardisation scripts.
2	Examiners must award **whole marks** (not half marks, or other fractions).
3	Examiners must award marks **positively**. This means that: • marks are not deducted for errors or omissions • marks are awarded for correct/valid answers as defined in the mark scheme and also for **other valid answers** which go beyond the scope of the syllabus and mark scheme referring to your team leader as appropriate • the quality of spelling, punctuation and grammar are judged **only** when the mark scheme indicates that these features are **specifically assessed** in the question. However, the meaning of all responses must be unambiguous.
4	Examiners must **consistently** apply the requirements of the mark scheme and any rules for what to do when candidates have not followed instructions correctly.
5	Examiners must use the **full range of marks** defined in the mark scheme, unless limited by the quality of the candidate responses seen.
6	Examiners must award marks according to the mark scheme and **must not** award marks with grade thresholds or grade descriptions in mind.

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Mathematics-Specific Marking Principles

1 Unless a particular method has been specified in the question, full marks may be awarded for any correct method. However, if a calculation is required then no marks will be awarded for a scale drawing.

2 Unless specified in the question, non-integer answers may be given as fractions, decimals or in standard form. Ignore superfluous zeros, provided that the degree of accuracy is not affected.

3 Allow alternative conventions for notation if used consistently throughout the paper, e.g. commas being used as decimal points.

4 Unless otherwise indicated, marks once gained cannot subsequently be lost, e.g. wrong working following a correct form of answer is ignored (isw).

5 Where a candidate has misread a number or sign in the question and used that value consistently throughout, provided that number does not alter the difficulty or the method required, award all marks earned and deduct just 1 A or B mark for the misread.

6 Recovery within working is allowed, e.g. a notation error in the working where the following line of working makes the candidate's intent clear.

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Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	More information required
	Accuracy mark awarded zero
	Accuracy mark awarded one
	Accuracy mark awarded two
	Accuracy mark awarded three
	Independent mark awarded zero
	Independent mark awarded one
	Independent mark awarded two
	Independent mark awarded three
	Benefit of the doubt

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Annotation	Meaning
C	Communication mark
✗	Incorrect
FT	Follow through
Highlighter	Highlight a key point in the working
ISW	Ignore subsequent work
M0	Method mark awarded zero
M1	Method mark awarded one
M2	Method mark awarded two
M3	Method mark awarded three
MR	Misread
O	Omission
Off-page comment	Allows comments to be entered at the bottom of the RM marking window and then displayed when the associated question item is navigated to.
On-page comment	Allows comments to be entered in speech bubbles on the candidate response.
Pre	Premature rounding/approximation
SC	Special case
SEEN	Indicates that work/page has been seen
TE	Transcription error

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Annotation	Meaning
✓	Correct
XP	Correct answer from incorrect working

MARK SCHEME NOTES

The following notes are intended to aid interpretation of mark schemes in general, but individual mark schemes may include marks awarded for specific reasons outside the scope of these notes.

Types of mark

M Method marks, awarded for a valid method applied to the problem.

A Accuracy mark, awarded for a correct answer or intermediate step correctly obtained. For accuracy marks to be given, the associated Method mark must be earned or implied.

B Mark for a correct result or statement independent of Method marks.

When a part of a question has two or more 'method' steps, the M marks are in principle independent unless the scheme specifically says otherwise; and similarly where there are several B marks allocated. The notation 'dep' is used to indicate that a particular M or B mark is dependent on an earlier mark in the scheme.

Abbreviations

awrt answers which round to
cao correct answer only
dep dependent
FT follow through after error
isw ignore subsequent working
nfww not from wrong working
oe or equivalent
rot rounded or truncated
SC Special Case
soi seen or implied

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Partial Marks</th><th>Guidance</th></tr>
<tr><td>1(a)</td><td>
<table>
<tr><th>number</th><th>factors</th><th>first six multiples</th></tr>
<tr><td>7</td><td>1, 7</td><td>7, 14, 21, 28, 35, 42</td></tr>
<tr><td>8</td><td>1, 2, 4, 8</td><td>8, 16, 24, 32, 40, 48</td></tr>
<tr><td>9</td><td>1, 3, 9</td><td>9, 18, 27,36, 45, 54</td></tr>
<tr><td>10</td><td>1, 2, 5, 10</td><td>10, 20, 30, 40, 50, 60</td></tr>
</table>
</td><td>2</td><td>B1 for 2 correct cells</td><td>Ignore any additional multiples
Accept factors or multiples in any order</td></tr>
<tr><td>1(b)(i)</td><td>[HCF =] 2
[LCM =] 20</td><td>1</td><td></td><td></td></tr>
<tr><td>1(b)(ii)</td><td>[HCF =] 1
[LCM =] 21</td><td>2</td><td>B1 for each</td><td></td></tr>
</table>

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Partial Marks</th><th>Guidance</th></tr>
<tr><td rowspan="2">2(a)</td><td>
<table>
<tr><th>Integers (a and b)</th><th>HCF</th><th>LCM</th><th>$a \times b$</th></tr>
<tr><td>4 and 10</td><td>2</td><td>20</td><td>40</td></tr>
<tr><td>3 and 7</td><td>1</td><td>21</td><td>21</td></tr>
<tr><td>9 and 12</td><td>3</td><td>36</td><td>108</td></tr>
<tr><td>6 and 8</td><td>2</td><td>24</td><td>48</td></tr>
<tr><td>5 and 9</td><td>1</td><td>45</td><td>45</td></tr>
<tr><td>4 and 6</td><td>2</td><td>12</td><td>24</td></tr>
<tr><td>3 and 10</td><td>1</td><td>30</td><td>30</td></tr>
<tr><td>8 and 14</td><td>2</td><td>56</td><td>112</td></tr>
</table>
</td><td>2</td><td>B1 for 5 correct entries</td><td></td></tr>
<tr><td>1, 2, 7, 14 seen
or 14, 28, 42, 56 seen</td><td>C1</td><td></td><td>May be seen on factor tree
Accept values in any order
Ignore additional multiples</td></tr>
<tr><td>2(b)</td><td>HCF × LCM = $a \times b$ oe</td><td>1</td><td></td><td></td></tr>
<tr><td rowspan="2">2(c)</td><td>20</td><td>1</td><td></td><td></td></tr>
<tr><td>$\frac{4 \times 80}{16}$</td><td>C1</td><td></td><td>May be in stages
Accept $320 \div 16$</td></tr>
</table>

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Question	Answer	Marks	Partial Marks	Guidance
3(a)	[HCF] xy oe [LCM] x^2y^3 oe	**2**	**B1** for each	
3(b)	[$a \times b$] $x^2y \times xy^3 = x^3y^4$ and [HCF × LCM] $xy \times x^2y^3 = x^3y^4$	**2**	**B1** for each **FT** *their* correct **2(b)**	Accept e.g. $\frac{x^2y \times xy^3}{x^2y^3} = xy$ from $\frac{a \times b}{LCM} = HCF$

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Partial Marks</th><th>Guidance</th></tr>
<tr><td rowspan="2">4(a)</td><td>
<table>
<tr><th>HCF of a, b, c (P)</th><th>LCM of a, b, c (Q)</th><th>HCF of a and b (R)</th><th>HCF of a and c (S)</th><th>HCF of b and c (T)</th></tr>
<tr><td>2</td><td>24</td><td>2</td><td>6</td><td>4</td></tr>
<tr><td>1</td><td>20</td><td>5</td><td>1</td><td>2</td></tr>
<tr><td>3</td><td>180</td><td>3</td><td>3</td><td>3</td></tr>
<tr><td>4</td><td>120</td><td>4</td><td>4</td><td>4</td></tr>
<tr><td>3</td><td>36</td><td>3</td><td>9</td><td>6</td></tr>
</table>
</td><td>2</td><td>B1 for 5 correct entries</td><td></td></tr>
<tr><td>One list, to 120, of multiples of 20 or 12 or 8.
or two prime factor decompositions from 20, 12 and 8</td><td>C1</td><td></td><td>Condone partial lists if intention clear
e.g. 20, 40, … 120, ...
12, 24, 36, 48, 60, 72, 84, 96, 108, 120, ...
8, 16, ..., 64, 72, 80, …, 112, 120, ...

[20] $2 \times 2 \times 5$
[12] $2 \times 2 \times 3$
[8] $2 \times 2 \times 2$
Accept 2^2 for 2×2 and 2^3 for $2 \times 2 \times 2$</td></tr>
</table>

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Question	Answer	Marks	Partial Marks	Guidance
4(b)	$[(a \times b \times c) \times]\ P = Q \times R \times S \times T$ *oe*	**1**	Q, R, S and T can be in any order	e.g. $[(a \times b \times c) \times]\ 1 = \frac{Q}{P} \times R \times S \times T$
	Correct numerical statements e.g. $320 \times 2 = 640$ and $40 \times 4 \times 2 \times 2 = 640$	**C1**		$162 \times 3 = 18 \times 3 \times 3 \times 3 = 486$ $320 \times 2 = 40 \times 4 \times 2 \times 2 = 640$ $576 \times 2 = 24 \times 2 \times 6 \times 4 = 1152$ $200\ [\times 1] = 20 \times 5 \times 1 \times 2 = 200$ $1620 \times 3 = 180 \times 3 \times 3 \times 3 = 4860$ $1920 \times 4 = 120 \times 4 \times 4 \times 4 = 7680$ $1944 \times 3 = 36 \times 3 \times 9 \times 6 = 5832$ Accept e.g. 3^3 for $3 \times 3 \times 3$
4(c)	36 and 24 12 and 72	**2**	**B1** for one correct pair or **B1** for 24, 36 and 72, 12 seen	
	$40de \times 4 = 360 \times 4 \times 8 \times 12$	**C1**		Might be rearranged e.g. $de = \frac{360 \times 4 \times 8 \times 12}{40 \times 4}$
	3 factor pairs of 864 with multiples of 4 e.g. (4,216), (8,108), (12,72)… or 12 identified as the HCF of d and e or $864 = 2^5 \times 3^3$	**C1**		Ignore extras Accept e.g. $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3$
	LCM check: 360 or 72 divided by a value from one of *their* factor pairs or a check that 8 is a factor of one number in 12 and 72 or 36 and 24 or checking that HCFs for *their* 40, d and e are 4, 8 and 12 or $360 = 3^2 \times 2^3 \times 5$ or $40 = 2^3 \times 5$	**C1**		e.g. $360 \div 72$

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Question	Answer	Marks	Partial Marks	Guidance
5	Mention of circumference and $10 \times \pi$ or $2 \times \pi \times 5$	**2**	**B1** for each	Do not accept C for circumference Accept numerical value for π
6(a)	45°	**1**		Accept indicated on diagram Condone missing degree symbol
6(b)	[pitch =] 31.4	**1**	**FT** 31.4 × tan (*their* angle)	Accept 31.41 to 31.42 Do not accept 33.7 from **7(b)** for *their* angle
	$\sqrt{their\,\text{pitch}^2 + 31.4^2}$ oe or $\dfrac{31.4}{\sin(their\,45)}$ or $\dfrac{31.4}{\cos(their\,45)}$	**C1**	**FT** *their* **6(a)**	$\sqrt{31.4^2 + 31.4^2}$ oe Square root must extend beyond the '+' sign Accept 31.41 to 31.42 Accept $\times 1$ or $\times \sin 90$ on numerator Do not accept the use of a = 33.7 from **7(b)** for **C1**
	[length =] 44.4 or 44.40 to 44.41 oe	**1**		Accept in metres e.g. 0.444
	cm	**C1**	Correct units seen once on answer line	Accept consistent units
7(a)	$\tan a = \dfrac{2}{3}$ leading to 33.69[...]	**2**	**B1** for $\tan a = \dfrac{2}{3}$	May be seen as: e.g. $\tan^{-1}\dfrac{2}{3}$ or e.g. $\tan a = \dfrac{20.93[33...]}{31.4}$ from correct working

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Question	Answer	Marks	Partial Marks	Guidance
7(b)	[pitch =] 20.9 to 20.95 [helix length =] 37.7 to 37.8	**2**	**B1** for each	
	$31.4 \times \frac{2}{3}$ oe or $31.4 \times \tan 33.7$	**C1**		Accept 10π for 31.4 Accept use of sine rule: $\sin 33.7 \times \frac{31.4}{\sin 56.3}$
	$31.4 \div \cos 33.7$ or $\sqrt{31.4^2 + (their\ \text{pitch})^2}$	**C1**		
8(a)	$\frac{h}{t} = \frac{P}{\pi D}$ oe or $\tan a = \frac{h}{t}$ and $P = \pi D \times \tan(a)$ oe	**C1**		Accept $\frac{h}{t} \times \pi D$ or $\frac{\pi D}{t} \times h$ Accept 3.14 oe for π throughout **Q8**
	$P = \frac{\pi D h}{t}$	**1**		

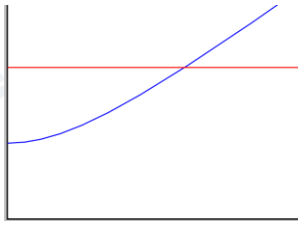
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Question	Answer	Marks	Partial Marks	Guidance
8(b)	$\sqrt{(\pi D)^2 + \left(\frac{\pi Dh}{t}\right)^2}$	2	**B1FT** for $\sqrt{(\pi D)^2 + (\textit{their } P)^2}$ or **B1** for $(\pi D)^2 + \left(\frac{\pi Dh}{t}\right)^2$	
	$\sqrt{(\pi D)^2\left(1+\left(\frac{h}{t}\right)^2\right)}$ or $\sqrt{(\pi D)^2}\sqrt{1+\left(\frac{h}{t}\right)^2}$ $H_1 = \pi D\sqrt{1+\left(\frac{h}{t}\right)^2}$	1		Accept $\pi^2 D^2$ for $(\pi D)^2$ $\frac{h^2}{t^2}$ for $\left(\frac{h}{t}\right)^2$
8(c)	$\frac{Lt}{\pi Dh}$ oe	1	**FT** *their* **8(a)**	Accept two tier fractions e.g. $\frac{L}{(\textit{their})\frac{\pi Dh}{t}}$

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Question	Answer	Marks	Partial Marks	Guidance
8(d)	**EITHER:** METHOD 1 $[H_2 =]\ \frac{Lt}{\pi Dh}[\times]\ \pi D\sqrt{1+\left(\frac{h}{t}\right)^2}$ $[H_2 =]\ \frac{Lt}{h}\sqrt{1+\left(\frac{h}{t}\right)^2}$	**2**	**B1FT** for $[H_2 =]\left(their\ \frac{Lt}{\pi Dh}\right)[\times]\ \pi D\sqrt{1+\left(\frac{h}{t}\right)^2}$	
	$[H_2 =]\ L\sqrt{\frac{t^2}{h^2}1+\frac{t^2}{h^2}\left(\frac{h}{t}\right)^2}$ oe leading to $[H_2 =]\ L\sqrt{\frac{t^2}{h^2}+1}$	**1**		Accept $L\sqrt{\left(\frac{t^2}{h^2}\right)\left(1+\frac{h^2}{t^2}\right)}$
	OR:			
	METHOD 2 Time $=\frac{L}{h}$, and $H_2 = \sqrt{h^2+t^2}\times\frac{L}{h}$	**(2)**	**B1** for Time $=\frac{L}{h}$, or $H_2 = \sqrt{h^2+t^2}\times\frac{L}{h}$	
	$H_2 = L\sqrt{\frac{h^2}{h^2}+\frac{t^2}{h^2}}$ *oe* leading to $[H_2 =]\ L\sqrt{\frac{t^2}{h^2}+1}$	**(1)**		Accept $L\sqrt{\frac{1}{h^2}\left(h^2+t^2\right)}$

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Question	Answer	Marks	Partial Marks	Guidance
9	$100 = 50\sqrt{\frac{t^2}{3^2}+1}$ oe	**C1**		Accept 9 for 3^2 Substitution may occur later
	Suitable sketch with horizontal line  or $\left(\left(\frac{100}{50}\right)^2-1\right)\times 3^2 = t^2$ or better.	**C1**		May see $d = \sqrt{100^2 - 50^2} = 86.6025...$ C1 $\frac{\text{speed}}{3} = \frac{86.6025....}{50}$ C1 Accept $3\times 3^2 = t^2$ or $t = \sqrt{27}$
	5.2 cm/s	**1**		Accept 5.20 or 5.196[...] Condone missing units

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