

Cambridge International AS & A Level

THINKING SKILLS**9694/12**

Paper 1 Problem Solving

October/November 2025**MARK SCHEME**Maximum Mark: 50

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of **8** printed pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

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
	Correct item
	Incorrect item
	Individual mark of partial credit
	Double mark of partial credit
	Essential element of answer/working missing
	Judged to be not good enough to earn the relevant credit
	Benefit of doubt
	Correct follow through
	Transcription error
	Special case
	Working seen but no credit awarded; blank page checked
Highlighter	Use anywhere it is helpful to clarify the marking

NOTES FOR MARKERS**Working**

Where a final answer is underlined in the mark scheme, full marks are awarded for a correct answer, regardless of whether there is any supporting working, unless an exception is noted in the mark scheme.

For partial credit, the evidence needed to award the mark will usually be shown on its own line in the mark scheme, or else will be defined in italic text.

For explanations and verbal justifications, apply the principle of ‘words to that effect’.

Units

Unless required by the question or mark scheme, units such as \$ do not need to be seen to award the marks.

No response

If there is any attempt at a solution award 0 marks not NR. “-” or “?” constitute no attempt at a solution.

Abbreviations

The following abbreviations may be used in a mark scheme:

AG	answer given (on question paper)
awrt	answer which rounds to
dep	mark depends on earlier, asterisked (*), mark
ft	follow through (from earlier error)
oe	or equivalent
SC	special case
soi	seen or implied

Question	Answer	Marks
1(a)	$10 + 19 + 9.50 = \$\underline{38.50}$	1
1(b)	$45 - 20 - 10 = 15$ $15 \div 0.5 = \underline{30}$ km	1

Question	Answer	Marks
2(a)	9	1
2(b)	Ariel: 6 Gemma: 0 Libby: 3 Sage: 2 Virat: 4	1

Question	Answer	Marks
3(a)	$2^{\text{nd}} + 5^{\text{th}} = 16$ and $2^{\text{nd}} + 4^{\text{th}} + 5^{\text{th}} = 18$, so 4^{th} must be $(18 - 16 =) 2$	1
3(b)	4^{th} is 2 and $1^{\text{st}} + 4^{\text{th}} = 10$, so 1^{st} is 8 $1^{\text{st}} + 4^{\text{th}} = 10$ and $1^{\text{st}} + 3^{\text{rd}} + 4^{\text{th}} = 13$, so 3^{rd} is 3 3^{rd} is 3 and $3^{\text{rd}} + 6^{\text{th}} = 8$, so $6^{\text{th}} = 5$ 6^{th} is 5 and $2^{\text{nd}} + 6^{\text{th}} = 12$, so 2^{nd} is 7 2^{nd} is 7 and $2^{\text{nd}} + 5^{\text{th}} = 16$, so 5^{th} is 9 The complete passcode is <u>873295</u> <i>1 mark for any three digits (except 2) correct</i>	2

Question	Answer	Marks
4(a)	Teaching must cover the shortfall of $\$1600 - \$500 = \$1100$ [1] So the minimum number of days is <u>7</u> <i>SC: 1 mark for final answer of 9</i>	2
4(b)(i)	In order to have \$1600, tax must have been paid on a sum which results in \$600, so the amount earned must be at least $\$1000 + \$600/0.8 = \$1750$ [1] The shortfall is now \$1250, so the minimum number of days is $1250/180 = 7$ OR <u>7</u> (days earned him \$1760, on which he will pay $20\% \times 760 =$) \$152 [1] leaving him with \$1608, which is sufficient	2
4(b)(ii)	\$152 <i>ft from (b)(i) provided it is 8, 9 or 10</i>	1
4(c)	<u>13</u>	1

Question	Answer	Marks
5(a)	<u>70</u>	1
5(b)	<u>8. 6. 4. 3</u>	1
5(c)	8 points for 1st place gives a total score of 32 AND The most that Green could score is $6 + 4 = 10$ points, which would only give them a total of 31	1
5(d)	<u>Yellow, Green, Blue, Yellow, Blue</u> <i>1 mark for any correctly processed sets of points where Red is not in the first five positions and Yellow scored at least 8</i>	2

Question	Answer	Marks
6(a)	$4 \times 4 \times 4 \times 4 \times 4 =$ <u>1024</u>	1
6(b)(i)	8 units for a sandwich [1] $\$4.99/8 = \0.62375 Unit price <u>\$0.62</u>	2
6(b)(ii)	13 units [1] $13 \times 0.62 =$ <u>\$8.06</u> <i>ft their answer to (b)(i), provided it is in money format</i>	2

Question	Answer	Marks
7	<u>190</u> books 2 marks for $31 \times \\$6$ AND $53 \times \\$15$ 1 mark for sight of any correct calculation of: multiples of \$6 and \$15 that add up to \$981, e.g. $(61 \times \\$6) + (41 \times \\$15) = \\$981$ OR multiples of \$6 and \$15 with a total of 84 customers, e.g. $(50 \times \\$6) + (34 \times \\$15) = \\$810$ OR for correct subtraction from 981 of a multiple of 6 or 15 and verifying whether the remainder is a multiple of the other OR If all bought 1 book $84 \times \\$6 = \\504. [1] Each one that bought 3 instead increases this by \$9, so $(\\$981 - \\$504) \div 9 = 53$ [1] bought 3 books. Number of books sold = $53 \times 3 + 31 = \underline{190}$. OR $a + b = 84$ $6a + 15b = 981$ 1 mark for both $a = 31, b = 53$ 1 mark for both <u>190</u>	3

Question	Answer	Marks
8(a)	(Arrives in E at 11:05, leaves on) 11:30 train [1] Arrives in F at 12:40, leaves on 13:05 ferry, arriving in G at <u>14:20</u> SC: 1 mark for answer 13:50	2
8(b)	(Eddie needs to be in E by 16:05, so must catch the train from F at) 14:50 [1] Needs 50 minutes in F, so must arrive in F by 14:00 (He needs to catch the ferry at) 12:35 [1] giving a total journey time of <u>4 hours</u>	3

Question	Answer	Marks
9	<u>4, 7, 5, 4, 4</u> 1 mark for any two correct OR 2 marks for any four correct	3

Question	Answer	Marks
10(a)	70% to 50% took 75-39 days, so $75 + 36 =$ day <u>111</u>	1
10(b)	Empty on day 150 so last date is 11 days before that day <u>139</u>	1
10(c)	Consumption is $600/75 = 8$ litres per day. [1] Only safe to order what is missing on order date. $1200 - (8 \times 11)$ litres = <u>1112</u> litres	2

Question	Answer	Marks
11(a)	Sea Creatures talk: (11:15 –) 11:40 [1] Train Ride: 12:00 – 13:10 Penguin Feeding: 13:30 – <u>14:15</u>	2
11(b)	Train Ride: 16:00 (– 17:10) [1] Sea Creatures talk: 15:15 (– 15:40) [1] Penguin Feeding: 13:30 (– 14:15) [1] <i>SC: 1 mark for a set of three times with final event Sea Creatures talk at 16:20</i>	3

Question	Answer	Marks
12(a)	3 months in correct place [1] <u>1 Mules 2 Zelum 3 Sirop 4 Polij 5 Jura 6 Helum</u>	2
12(b)	4th Polij to 4th Mules 72 days [1] <u>21 days</u>	2

Question	Answer	Marks
13(a)	97	1
13(b)	Longest possible sequence for a single digit is 1 7 9 8 soi [1] Any seven numbered sequence starting 11, ending 88 and stepping one or other each time, e.g. 11 17 19 79 99 98 88. <i>SC: 1 mark for any valid sequence of 5 numbers or more</i>	2