

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS Cambridge Checkpoint

## MATHEMATICS

Paper 2 SPECIMEN MARK SCHEME

1112/02 For Examination from 2012

1 hour

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## **MAXIMUM MARK: 50**

This document consists of 5 printed pages and 1 blank page.



Question	1			
Part	Mark	Answer	Further Information	
(a)	1	30		
(b)	2	32	1 mark for their total ÷ 9 seen	
Total	3		•	

Questi	ion	2			
Part		Mark	Answer	Further Information	
(a)	(i)	1	9 (litres)		
	(ii)	1	0.5 (litres)		
(b)		2	3 : 1 : 2	1 mark for 1500 : 500 : 1000 or better seen: Do not accept: 1.5 : 0.5 : 1	
(c)		2	720	1 mark for 450 ÷ 5 or 90 seen	
Total		6			

Question 3				
Part		Mark	Answer	Further Information
(a)	(i)	1	80	
	(ii)	2	5	1 mark for 100 = 35 + 15 <i>h</i> or 75 seen
(b)		2	$\frac{k+2}{3}$ [or equivalent]	1 mark for $k + 2 = 3m$ seen or $\frac{k-2}{3}$ or $k + \frac{2}{3}$ as answer
Total		5		

Quest	Question				
Part		Mark	Answer	Further Information	
(a)	(i)	1	15 18		
	(ii)	1	3.18 pm [or follow through answer from <b>(a) (i)</b> ]	Award mark for their time from (i) written in 12-hour clock. Must include pm	
(b)		1	19 (minutes)		
(c)		2	40 (km/h)	1 mark for 10 ÷ 0.25 [or equivalent]	
Total		5		•	

Question	5		
Part	Mark	Answer	Further Information
(a)	1	(3, 2) marked	
(b)	1	(-3, 3)	
(c)	1	C drawn correctly	
(d)	2	90° clockwise centre (0, 0)	Or 270° anticlockwise. Answer must include both angle and direction.
Total	5		

Question	6		
Part	Mark	Answer	Further Information
(a)	1	14, 17	both correct
(b)	1	32	
(c)	2	3p + 2 [or equivalent]	1 mark for expression with 3p
(d)	1	Reason to show why 60 is not in the sequence e.g. Pattern 19 is 59 and pattern 20 is 62. None of the numbers are in the 3 times table and 60 is. 60 counters is pattern 19 1/3	Award 0 for answers such as: Pattern 60 uses 182 counters. It takes too long to draw.
Total	5		· ·

Question	7		
Part	Mark	Answer	Further Information
(a)	1	15.6	
(b)	2	4, 3 and 2 seen – 1 mark 24 (cm <sup>3</sup> ) – 1 mark	any order, all correct
(c)	2	39.(26990)	For 2 marks allow any rounding or truncating of 39.26990 1 mark for $\frac{1}{2} \times \pi \times 5^2$
Total	5		

Question	8		
Part	Mark	Answer	Further Information
(a)	1	\$1380	
(b)	2	20 (%)	1 mark for $\frac{48}{240} \times 100$
(c)	2	(\$) 156	1 mark for $150 \times \frac{104}{100}$ or $150 + 150 \times \frac{4}{100}$ [or equivalent] or \$6 seen
Total	5		

Question	9		
Part	Mark	Answer	Further Information
	3	Arc radius 7 cm centre A – 1 mark Line 2 cm from <i>AB</i> – 1 mark Intersection labelled <i>T</i> – 1 mark	Tolerance ± 2mm (Make and use overlay.)
Total	3		·

Quest	ion	10			
Part		Mark	Answer	Further Information	
(a)		1	All cells completed correctly.		
(b)	(i)	1	$\frac{1}{25}$ or 0.04 or 4%	Award marks in <b>(b)</b> and <b>(c)</b> if answers follow through correctly from answers given in table.	
	(ii)	1	0	[Follow through answers given in table.]	
(c)		2	$\frac{2}{5}$	[Follow through answers given in table.] 1 mark for $\frac{10}{25}$ or 0.4 or 40%	
Total		5			

Question	11		
Part	Mark	Answer	Further Information
	3	Correctly stating Pythagoras' Theorem – 1 mark $40^2 + 25^2 = 1600 + 625 = 2225 - 1$ mark 47.(16990) – 1 mark	Allow any rounding or truncation of the correct answer 47.16990
Total	3		<u> </u>

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