Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

MATHEMATICS (US)	**0444/11**
Paper 1 (Core)	**May/June 2017**

MARK SCHEME

Maximum Mark: 56

Published

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Abbreviations

cao	correct answer only
dep	dependent
FT	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
nfww	not from wrong working
soi	seen or implied

Question	Answer	Marks	Part marks
1	70 020 cao	**1**	
2	$\dfrac{1}{25}$	**1**	
3	5	**1**	
4	x^{10}	**1**	
5	Congruent	**1**	
6	31 or 37	**1**	
7(a)	23.46 cao	**1**	
7(b)	20 cao	**1**	
8	$4n(3n - m)$ final answer	**2**	**B1** for $4(3n^2 - mn)$ or $n(12n - 4m)$ or $2n(6n - 2m)$ or $2(6n^2 - 2mn)$
9	6	**2**	**B1** for answer 2 or 3 or **M1** for prime factors of 126 and 150 seen
10(a)	Chicago	**1**	
10(b)	−3	**1**	
11	$21y + xy$ or $y(21 + x)$ final answer	**2**	**B1** for $14x + 21y$ or $-14x + xy$ or $ky + xy$
12	13 ……. −7	**1, 1**	
13(a)	$\begin{pmatrix} -2 \\ -5 \end{pmatrix}$	**1**	
13(b)	4, 2	**1**	
14	18	**2**	**M1** for 4500 ÷ 250 soi
15(a)	$\dfrac{21}{50}$ oe	**1**	
15(b)	210	**1FT**	**FT** *their* **(a)** × 750 provided 0 < *their* **(a)** < 1

Question	Answer	Marks	Part marks
16	$\dfrac{1}{9}$	2	**B1** for $\dfrac{4}{36}$ or $\dfrac{2}{18}$
17	$\dfrac{2s - 5t}{t}$ oe	2	**M1** for $\dfrac{2s}{t} = 5 + v$ or $2s = 5t + tv$ oe
18(a)	−5	1	
18(b)(i)	3 × (5 + 2) + 2 = 23	1	
18(b)(ii)	12 ÷ (4 + 2) = 2	1	
19	$2\dfrac{8}{21}$ cao	3	**M2** for $\dfrac{50}{21}$ or $1\dfrac{8}{21}$ or $\dfrac{29}{21}$ or $1\dfrac{29}{21}$ **M1** for $\dfrac{14\,(or\,35)}{21} + \dfrac{15}{21}$ oe
20	Correctly eliminating one variable	**M1**	
	[$x =$] 2	**A1**	
	[$y =$] −7	**A1**	If zero scored, **SC1** for 2 values satisfying one of the original equations **SC1** for both correct but no working
21(a)	420	1	
21(b)(i)	60	2	**M1** for 90 ÷ 3 × 2 soi
21(b)(ii)	1.08	3FT	**B2** for an answer of 10800 or **M2** for $0.9^2 + their\ 0.6 \times 0.9 \div 2$ or for $90^2 + their\ 60 \times 90 \div 2$ or **B1** for 8100 or 2700 or 0.81 or 0.27 seen or **M1** for 90 × 90 oe or $their\ 60 \times 90 \div 2$ oe or for a correct change of unit soi
22(a)	Points plotted at (4.5, 33) and (6.5, 35)	1	
22(b)	Positive	1	
22(c)	Correct ruled line	1	
22(d)	33.5 to 37.4	1FT	**FT** from *their* line provided positive gradient
23(a)(i)	7	1	
23(a)(ii)	$49p^2 - 2$ final answer	1	

Question	Answer	Marks	Part marks
23(b)(i)	−3	**1**	
23(b)(ii)	3	**1**	
23(b)(iii)	−6…..−1	**1**	
24(a)	Correct ruled bisector of *AB* with 2 pairs of arcs	**2**	**B1** for correct bisector with no or incorrect arcs or 2 pairs of correct arcs
24(b)	Correct ruled bisector of angle *ADC* with 2 pairs of arcs	**2**	**B1** for correct bisector with no or incorrect arcs or 2 pairs of correct arcs