

# **CAMBRIDGE INTERNATIONAL EXAMINATIONS**

**Cambridge International General Certificate of Secondary Education**

## **MARK SCHEME for the October/November 2015 series**

### **0444 MATHEMATICS (US)**

**0444/13**

Paper 1 (Core), maximum raw mark 56

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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
nfw	not from wrong working
soi	seen or implied

Question	Answer	Mark	Part marks
1	6054	1	
2	6.7	1	
3	3	1	
4	170 cao	1	
5	4	1	
6	6	1	
7 (a)	12, 15	1	
(b)	11, 13	1	
8 (a)	5	1	
(b)	Subtract 4 oe	1	
9	$5 - u$ final answer	2	<b>B1</b> for $5 + ku$ or $j - u, k \neq 0$ as final answer
10 (a)	2	1	
(b)	-9	1	
11	$tv - d$ oe	2	<b>M1</b> for $tv = s + d$ or $t - \frac{d}{v} = \frac{s}{v}$
12	$2^3 \times 3^2$ or $2 \times 2 \times 2 \times 3 \times 3$	2	<b>B1</b> for 2,2,2,3,3
13 (a)	Correct angle with correct arcs	2	<b>B1</b> for correct arcs and no line or correct line and no arcs
(b)	Correct angle bisector with arcs	2	<b>B1</b> for correct bisector with no arcs or for arcs with no bisector drawn
14	10.5	2	<b>M1</b> for at least 6 7 9 10 11 or for at least 10 11 15 18 20
15	240 $\text{cm}^3$	2 1	<b>M1</b> for $4 \times 10 \times 6$

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16	$\frac{7}{12}$	3	<b>M2</b> for $\frac{8}{12} + \frac{2}{12} - \frac{3}{12}$ oe or <b>B1</b> for any 2 correct over a common denominator
17 (a)	$3x + 21$ final answer	1	
(b)	$2x(1 - 2x)$ final answer	2	<b>B1</b> for $2(x - 2x^2)$ or $x(2 - 4x)$ as final answer
18 (a)	230	1	
(b)	$C$ marked in correct position	2	<b>B1</b> for correct distance 8 cm or correct bearing $155^\circ$
19 (a)	[0].00017	1	
(b)	$7.5 \times 10^{-4}$	2	<b>B1</b> for 0.00075 or for $7.5 \times 10^k$ or for $k \times 10^{-4}$ , $k$ non-zero
20 (a)	96	2	<b>M1</b> for $360 - (66 + 98 + 112)$
(b)	1800	2	<b>M1</b> for $(12 - 2) \times 180$ or $12 \times \left(180 - \frac{360}{12}\right)$
21 (a)	12	2	<b>M1</b> for $\frac{x}{7.2} = \frac{10}{6}$ oe
(b)	4.8	2	<b>M1</b> for $\frac{y}{8} = \frac{6}{10}$ oe
22 (a)	$\frac{90}{360}$	1	Accept equivalent fraction
(b)	50	2	<b>M1</b> for $\frac{150}{360} \times 120$ oe
23	Correctly equating one set of coefficients  Correct method to eliminate one variable  [x =] 4  [y =] -6	<b>M1</b>  <b>M1</b>  <b>A1</b>  <b>A1</b>	eg $10x + 4y = 16$ and $10x - 15y = 130$ or $15x + 6y = 24$ and $4x - 6y = 52$  eg $19y = k$ or $hx = 114$ or $19x = m$ or $ny = 76$  If zero scored <b>SC1</b> for correct substitution and evaluation to find other variable <b>SC1</b> if no working shown, but 2 correct answers given

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<b>24</b>	No because a single value of $x$ results in two different values of $y$ oe	<b>2</b>	<b>B1</b> for No with a less complete or more vague reason such as “No it fails the vertical line test”
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