MARK SCHEME for the May/June 2015 series

0444 MATHEMATICS (US)

| 0444/11 | Paper 1, maximum raw mark 56 |

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.

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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

		Answer	**Mark**	
1		Sunday	**1**	
2	**(a)**	4	**1**	
	(b)	16	**1**	
3	**(a)**	24 final answer	**1**	
	(b)	70	**1**	
4		360	**2**	**M1** for $2000 \div 50 \ [\times 9]$ oe
5		600	**2**	**M1** for $\dfrac{3000 \times 5 \times 4}{100}$ oe If zero scored, **SC1** for answer 3600
6		Correct triangle with correct pair of arcs	**2**	**M1** for a triangle with one other side correct or for correct pair of arcs
7	**(a)**	circle	**1**	
	(b)	parallelogram	**1**	
8		$[x =]\ 2y + b$ oe	**2**	**M1** for $2y = x - b$ or $y + \dfrac{b}{2} = \dfrac{x}{2}$
9	**(a)**	positive	**1**	
	(b)	More ice creams sold, more sun hats sold oe	**1**	
10		$24u^2w^3$ final answer	**2**	**B1** for 2 correct elements in final answer
11		1, 2, 3, 4, 5, 6, 7, 8 oe	**2**	**B1** for 1, 2, 3, 4, 5, 6, 7 oe
12	**(a)**	(0 , 5)	**1**	
	(b)	$y = 3x + k$	**1**	k must be a number, $\neq 5$
13	**(a)**	$w\,(3w - 2)$	**1**	
	(b)	$2x^2 + 8x - 35$ final answer	**2**	**M1** for 2 terms correct or for $2x^2 + 3x$ or $5x - 35$

14			1.8	3	**M2** for $\dfrac{10 \times 6 \times 2 \times 5 \times 3}{1000}$ oe or **M1** for $6 \times 2 \times 5 \times 3$ or better **and B1** for correct conversion to liters seen
15	**(a)**		5.5	2	**M1** for $330 \div (12 \times 5)$ oe
	(b)		1320	1	
16			$\dfrac{5}{21}$ cao	3	**B1** for $\dfrac{9}{5}$ or $\dfrac{5}{9}$ or $\dfrac{63}{35}$ or $\dfrac{35}{63}$ **and M1** for $\dfrac{3}{7} \times$ *their* $\dfrac{5}{9}$ or $\dfrac{15}{35} \div$ *their* $\dfrac{63}{35}$
17	**(a)**		8.26×10^4	1	
	(b)		7.5×10^8	2	**B1** for correct answer **not** in scientific notation i.e. 750 000 000 or **B1** for answer $k \times 10^8$ or 7.5×10^k
18			3	3	**B1** for $15y - 10$ seen or **M1** for $3y - 2 = 35 \div 5$ **and M1** for $15y = 35 +$ *their* (5×2) or $3y =$ *their* $(35 \div 5) + 2$
19			144π or 14400π	2	**M1** for $4 \times \pi \times 6^2$ If zero scored, **SC1** for answer 576π
			correct units	1	Units **must** match their surface area i.e. 14400π cm^2 does not get this mark If **M0**, then **SC1** for cm^2
20	**(a)**	**(i)**	27, 38	2	**B1** for 27 **and B1FT** for *their* 27 + 11
		(ii)	Add the next odd number oe	1	
	(b)		1, 5, 9	1	
21	**(a)**		$2 \times 3 \times 5$	2	**B1** for 2, 3, 5 as prime factors
	(b)		90	2	**B1** for $90k$ or a list of multiples or $2 \times 3^2 \times 5$

22	(a)	7.5	2	$M1$ for $[10] \times \dfrac{6}{8}$ oe
	(b)	12 cao	2	$M1$ for $9 \times \dfrac{8}{6}$ oe or $9 \times \dfrac{10}{their\ (a)}$