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**MATHEMATICS**

**0580/12**

Paper 1 (Core)

**October/November 2017**

MARK SCHEME

Maximum Mark: 56

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**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	Partial marks
1	14 027	1	
2	-3	1	
3	1	1	
4	[0].00517	1	
5	$\frac{31}{50}$ , $\frac{5}{8}$ , 0.63, 64%	2	<b>B1</b> for 3 in correct order or <b>M1</b> for 0.62 or 62% <b>and</b> 0.625 or 62.5% or 4 fractions with a common denominator
6	10.1[0]	2	<b>M1</b> for [4.5 +] ( $7 \times [0].8$ ) or $450 + 7 \times 80$
7	2.1	2	<b>B1</b> for 2.08 or 2.079... or 2.10
8(a)	2, 3, 4, 6	1	
8(b)	27, 36 cao	1	
9	[x =] 60 [y =] 40	2	<b>B1</b> for each or for two numbers that add to 100
10	2.5	2	<b>M1</b> for 2200 or 0.055 seen or <b>SC1</b> for answer figs 25
11	32	2	<b>M1</b> for $\frac{1}{2} \times 33 \times h = 528$ oe
12(a)	Positive	1	
12(b)	No correlation oe	1	
13	[0].35	2	<b>M1</b> for $1 - (0.15 + 0.3 + 0.2)$
14	361.5	1	
	362.5	1	If zero scored, <b>SC1</b> for both correct but reversed

Question	Answer	Marks	Partial marks
15	52.2 or 52.19 to 52.20	2	<b>M1</b> for $\sin [\dots] = \frac{6.4}{8.1}$ oe
16(a)	(2, 5)	1	
16(b)	Point plotted at (7, -2)	1	
16(c)	Isosceles cao	1	
17(a)	9	1	
17(b)	Midpoint marked	1	
17(c)	Perpendicular line drawn	1	
18	120 nfw	3	<b>M2</b> for $180 - \frac{360}{6}$ oe $\frac{180 \times (6-2)}{6}$ or <b>M1</b> for $\frac{360}{6}$ soi by 60 or $180 \times (6-2)$ soi by 720
19	Correct ruled net	3	<b>B2</b> for 4 more correct faces in correct position or <b>B1</b> for 2 or 3 more correct faces in correct position
20(a)	$3\frac{2}{3}$ cao	1	
20(b)	$\frac{3}{12}$ [and $\frac{5}{12}$ ] oe	<b>M1</b>	For correct method to find common denominator e.g. $\frac{12}{48}$ and $\frac{20}{48}$
	$\frac{2}{3}$ cao	<b>A1</b>	
21	$[y =] 0.5x + 2$ oe	3	<b>M2</b> for $[y =] 0.5x + c$ oe $c \neq 2$ or <b>M1</b> for $\frac{\text{rise}}{\text{run}}$ and <b>B1</b> for $kx + 2, k \neq 0$
22(a)(i)	36	1	
22(a)(ii)	Add 7 oe	1	
22(b)	$4n - 2$ oe	2	<b>M1</b> for $4n + k, k \neq -2$ oe
23(a)	$\frac{5}{14}$ or 0.357 or 0.357...	2	<b>M1</b> for $7 - 2 = 11n + 3n$ oe or better
23(b)	18	2	<b>M1</b> for $p - 3 = 3 \times 5$ or $\frac{p}{5} = 3 + \frac{3}{5}$

Question	Answer	Marks	Partial marks
24(a)	6	2	<b>M1</b> for $\frac{15}{12.5}$ or $\frac{12.5}{15}$ or $\frac{12.5}{5}$ or $\frac{5}{12.5}$ soi
24(b)	10	2	<b>M1</b> for $\frac{12.5}{15} \times 12$ or $12 \div \frac{15}{12}$ soi