MATHEMATICS	**0580/11**
Paper 1 Core	**May/June 2016**
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	Mark	Part marks
1		8(h) 52 (min)	1	
2		3.75 or 3¾	1	
3		[0].72 oe	1	
4		[0].00127	1	
5		60	1	
6		157 900 cao	2	**B1** for 158 000 or 157 860 or 157 862 to 157 863 If zero scored, **SC1** for *their* answer to more than 4 figs correctly rounded to 4 sf
7	(a)	Acute	1	
	(b)	Pentagon	1	
8	(a)	$\begin{pmatrix} -6 \\ 4 \end{pmatrix}$	1	
	(b)	$\begin{pmatrix} 10 \\ -40 \end{pmatrix}$	1	
9	(a)	3	1	
	(b)	All three correct lines of symmetry drawn	1	
10		393	2	**B1** for 393.1 to 393.2 or **M1** for 2000 ÷ 5.087
11		144	2	**M1** for finding a correct product of prime factors or correctly listing a minimum of 3 multiples of 36 **and** 48 or for answer $2^4 \times 3^2$ oe or 144*k*
12		11	2	**M1** for $-2 \times -7 - 3$ soi

Question	Answer	Mark	Part marks
13	$\dfrac{py}{q}$ final answer	2	**M1** for one correct step
14	[a =] 70 [b =] 40	2	**B1** for each
15	21	2	**M1** for $\dfrac{15}{6}$ oe or $\dfrac{6}{15}$ oe or $\dfrac{8.4}{6}$ or $\dfrac{6}{8.4}$
16	$\dfrac{6}{7} \times \dfrac{3}{5}$ or $\dfrac{18}{21} \div \dfrac{35}{21}$ oe $\dfrac{18}{35}$ cao	M2 A1	**B1** for $\dfrac{5}{3}$ oe or **M1** for $\dfrac{6}{7} \times$ *their* $\dfrac{3}{5}$
17 (a)	19	1	
(b)	−2	1	
(c)	81	1	
18 (a)	Negative	1	
(b)	4	1	
(c) (i)	Ruled line of best fit	1	
(ii)	250 000 to 380 000	1	
19 (a)	Correct ruled angle bisector with all correct arcs	2	**M1** for accurate angle bisector with no / wrong arcs or for all correct arcs with no / wrong line
(b)	Correct ruled perpendicular bisector with two pairs of correct arcs	2	**M1** for accurate bisector with no / wrong arcs or for two pairs of correct intersecting arcs with no / wrong line
20	Correctly equating one set of coefficients Correct method to eliminate one variable [x =] −3 [y =] 7	M1 M1 A1 A1	 Dependent on first **M1** scored If zero scored, **SC1** for 2 values satisfying one of the original equations **or** 2 correct answers given but no working shown

Question	Answer	Mark	Part marks
21 (a) (i)	0, 1	**1**	
(ii)	2	**2**	**M1** for a correct rise ÷ run e.g. $4 \div 2$ or for right-angled triangle marked on graph with run = 1 and rise = 2 oe
(iii)	$[y =] 2x + 1$ final answer	**2FT**	**FT** *their* (a)(i) for *c* and *their* (a)(ii) for *m* **B1** for $y = 2x + c$ ($c \neq 1$) or $y = mx + 1$ ($m \neq 2$ or 0)
(b)	$y = 5x + c$ oe final answer	**1**	where $c \neq -3$
22 (a)	672	**2**	**M1** for $12 \times 8 \times 7$
(b)	12.5	**2**	**M1** for $675 \div (6 \times 9)$
(c)	540	**3**	**M2** for $(5 \times 9 \times 24) \div 2$ oe or **M1** for $(5 \times 9) \div 2$ or 22.5 seen

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