Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

MATHEMATICS **0580/01**

Paper 1 (Core) **For Examination from 2015**

SPECIMEN MARK SCHEME

1 hour

MAXIMUM MARK: 56

The syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of **4** printed pages.

CAMBRIDGE International Examinations

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Types of mark

M marks are given for a correct method.
A marks are given for an accurate answer following a correct method.
B marks are given for a correct statement or step.
D marks are given for a clear and appropriately accurate drawing.
P marks are given for accurate plotting of points.
E marks are given for correctly explaining or establishing a given result.
SC marks are given for special cases that are worthy of some credit.

Abbreviations

cao	correct answer only
cso	correct solution only
dep	dependent
ft	follow through after error
isw	ignore subsequent working
oe	or equivalent
SC	Special Case
www	without wrong working
art	anything rounding to
soi	seen or implied

Qu.	Answers	Mark	Part Marks
1	$\begin{pmatrix} -3 \\ 4 \end{pmatrix}$	**1**	
2	24 or 24 out of 30	**2**	**M1** for $\frac{4}{5} \times 30$
3	1.8	**2**	**M1** for $1.4 \div 7$ or **SC1** for **answer** 180
4	16	**2**	**B1** for 1cm to 0.5km oe or 800 000 (cm) or figs 16
5	**(a)** 25 **(b)** Green cao	**1** **1**	
6	7.5(0) cao	**2**	**M1** for $\frac{258.75}{4.6}$
7	**(a)** 120 **(b)** $\frac{9}{25}$ cao	**1** **2**	 **B1** for $\frac{36}{100}$ or $\frac{18}{50}$
8	**(a)** 7853 to 7855 or 7850 or 7860 www **(b)** 0.7853 to 0.7855 or 0.785 or 0.786	**2** **1ft**	**M1** for $\pi \times 50^2$ Their **(a)** ÷ 10 000 evaluated
9	**(a)** 15 **(b)** 2 (pm), 6 (pm) **(c)** 15	**1** **1** **1**	 Allow –15
10	**(a)** Rectangle or rhombus **(b)** Isosceles (triangle) **(c)** 5 cao	**1** **1** **1**	Either one or both given

11	$\frac{11k}{24k}$ final answer www		Method 1 (Addition first)
		B1	$\frac{8}{12}+\frac{3}{12}$ or $\frac{8+3}{12}$ oe
		M1	$\frac{1\times \text{their } 11}{2\times \text{their } 12}$
		A1	
			Method 2 (Multiplication first)
		B1	$\frac{2}{6}+\frac{1}{8}$ or $\frac{1}{3}+\frac{1}{8}$ oe
		M1	$\frac{ad+bc}{bd}$ for their $\frac{a}{b}+\frac{c}{d}$
		A1	
			If **M0**, **SC1** if $\frac{11}{12}$ is only followed by $\frac{11}{24}$ or if zero, **SC1** if work is entirely in decimals with answer of $0.458\dot{3}$ to 0.45835
12	**(a)** Correct ruled line	**1**	
	(b) –2.7, 0.7	**1, 1ft**	**B2ft** their ruled line through (0, 3) for two intersections given to 1 decimal place or **B1** for –2.70 to –2.75 and 0.70 to 0.75 or **B1ft** their ruled line through (0, 3) for two intersections not given to 1 decimal place
13	135 cao	**3**	**M1** for 720 or (6 – 2) × 180 oe seen in working and **M1** for equation 180 + 4x = their 720 or **M1** for (360 – 180) ÷ 4 (= 45) oe seen in working and **M1** dep for 180 – their 45
14	**(a)** 9x – 10 final answer	**2**	**B1** for 6x – 4 or 3x – 6 or for answer of 9x + j, or kx – 10
	(b) $2x^3 - 3x$ final answer	**2**	**B1** for answer in form $2x^3 + m$ or $n - 3x$
15	**(a)** Negative	**1**	Ignore embellishments
	(b) Correct point	**1**	
	(c) **(i)** Accurate ruled line	**1**	
	(ii) English mark	**1ft**	Follow through their **(c)(i)**
16	**(a)** 70	**2**	**B1** for angle ABD = 70° stated or seen on the diagram
	(b) **(i)** (y =) 80	**1**	
	(ii) (z =) 40	**1**	
	(iii) (t =) 10	**1ft**	Follow through 90 – their y or 50 – their z

17	**(a)** 7.42 or 7.416... cao	**3**	**M2** for $\sqrt{(8^2 - 3^2)}$ or complete alternate method or **M1** for $x^2 + 3^2 = 8^2$ or better
	(b) 67.97 to 68(.0) cao	**2**	**M1** for $\cos(y) = \frac{3}{8}$ oe
18	**(a)** 75	**2**	**M1** for $\frac{500 \times 5 \times 3}{100}$ oe or **SC1** for answer of 575
	(b) 3.81(25)	**4**	**M2** for 500 × 1.05 × 1.05 × 1.05 or **M1** for 500 × 1.05 × 1.05 **A1** for 578.81(25) or 78.81(25) seen and **A1ft** for value of $500(1.05)^3 - 500$ – their **(a)**