DarTutors · IGCSE Mathematics 0580-style practice

Paper 1 Non-calculator (Core) – Mark scheme

(maximum mark 80)

Abbreviations: M method mark · A accuracy mark (depends on the M mark) · B independent mark · FT follow through after an earlier error · oe or equivalent · isw ignore subsequent working. Award full marks for a correct answer unless the question says “show” or asks for working. This is a non-calculator paper: method marks should be awarded for clear written working. Parts of this mark scheme have not yet been reviewed by a teacher: check them before use.

Q	Part	Answer	Mark	Partial marks / guidance
1	(a)	20 376	1	
	(b)	20 400	1	FT their (a)
2	(a)	3	1	
	(b)	3	1	
3		100	2	M1 for 600 ÷ 6 or 600 ÷ (5 + 1)
4		0.54	2	M1 for 2.7 × 20 000 (= 54 000 cm) or B1 for figs 54 seen
5	(a)	10	1	
	(b)	9	1	
6		−8.3	1	
7		−170	1	
8	(a)	211	1	
	(b)	216	1	
9	(a)	−1.8	1	
	(b)	21	1	
10	(a)	4	1	
	(b)	0	1	The shading prevents any line of symmetry
11		112	2	M1 for 240 ÷ (7 + 8) × 7 or 240 ÷ 15 (= 16)
12		14/9 ÷ 16/9 → 14/9 × 9/16 = 14/16 = 7/8	2	B1 for both improper fractions 14/9 and 16/9; M1 for inverting and multiplying. No calculator decimals.
13		$(0.8)^2$	2	B1 for 3/5 = 0.6 and 2/3 = 0.666... or $(0.8)^2$ = 0.64 seen
14		35	2	M1 for 8.5 hours × 4 (= 34) or 510 ÷ 15
15	(a)	4 (°C)	1	
	(b)	4.5 (°C)	1	
16		A ∪ B′: shade all of A and the region outside both circles (everything except B only). (A ∩ B)′: shade everything except the overlap.	2	B1 for each correct diagram
17	(a)	√16 or 65/13	1	Accept 4 or 5
	(b)	π or √14	1	
18	(a)	1738.3	1	
	(b)	2.87×10^4	1	
	(c)	6.5	1	
19	(a)	36	1	

Q	Part	Answer	Mark	Partial marks / guidance
	(b)	2/3 × 6/7 = 12/21 = 4/7	2	B1 for 7/6 seen; M1 for inverting and multiplying (2/3 × 6/7)
20	(a)	0.55	1	
	(b)	250	2	M1 for 35 000 ÷ 140 or 35 ÷ 140 (= 0.25 kg)
21	(a)	67	1	
	(b)	0.00304	1	
	(c)	56.35	1	
22	(a)	21	1	
	(b)	$360x^2$	1	
	(c)	486	1	
23		Row 2: 11, 121, 1331 Row 3: 14, 196, 2744 Row 4: −7, 49, −343	3	B1 for each complete correct row
24	(a)	6000	2	M1 for 7200 ÷ 1.2 or 7200 ÷ 120 × 100
	(b)	12.5	2	M1 for (8100 − 7200) ÷ 7200 × 100 or 900/7200
25	(a)(i)	9	1	
	(a)(ii)	15 03 or 3.03 pm	1	
	(b)(i)	7	1	
	(b)(ii)	17	1	
26	(a)	3, 6, 9	2	B1 for two correct and no extras
	(b)	2, 3	1	
	(c)	54, 72, 90	1	
27	(a)	21	1	
	(b)	27	1	
28	(a)	(6, 2) as a column vector	1	
	(b)	C plotted at (1, 2)	1	
	(c)(i)	(4, −3) as a column vector	1	
	(c)(ii)	(−12, 4) as a column vector	1	
29	(a)	17	1	
	(b)(i)	−5.5	2	M1 for (−12 − 13 − 10 + 4 + 4 − 6) ÷ 6 or −33 ÷ 6
	(b)(ii)	−8	2	M1 for −10 and −6 identified as the middle values
	(b)(iii)	4	1	
30	(a)	Straight line from (08 10, 200) to (08 30, 900)	1	
	(b)	5	1	
	(c)	1.8	4	M1 for 900 m and 30 minutes used; M1 for 900 ÷ 30 (= 30 m/min) or 0.9 ÷ 0.5; M1 for correct conversion to km/h
		Total	**80**	