STADIRA TRAINING INSTITUTE

MARK SCHEME · Mathematics 0580/03 · Paper 3 (Core) · Mock Set 1

Maximum mark: 80

Question	Answer	Marks	Partial marks / guidance
1	six thousand and forty-nine	B1	
2	11 to 15	B1	accept a sensible estimate that uses whole + part squares
3	4 lines drawn: 2 diagonal, 1 horizontal, 1 vertical	B2	B1 for 2 correct lines and no incorrect lines
4	26.10	B3	M1 for 2 × 6.25 + 3 × 3.80 (= 23.90) M1 for 50 - their 23.90
5(a)	74.08 cao	B1	
5(b)	14	B1	
6(a)	258 to 262	B1	
6(b)	ratio 3 : 10 line drawn: 60° from one radius (tolerance ± 2°)	B3	M1 for their reflex × 3/13 (= 60°) A1 for 60° seen or implied B1 for a straight line from the centre
7(a)	7.8 to 8.2	B1	
7(b)	line PQ perpendicular to AB through P, length 11.7 to 12.3 cm	B3	B1 for perpendicular at P (± 2°) B2 for length 1.5 × their (a) (± 2 mm)
8	$\frac{13}{24}$ oe	B2	M1 for 1/2(1/4 + 5/6) oe or 6/24 and 20/24 seen
9(a)(i)	hands drawn at 14 35:	B1	hour hand between 2 and 3, minute hand at 7
9(a)(ii)	17 00 oe	B2	M1 for 14 35 + 2 h 25 min oe
9(b)	42	B2	M1 for 56 ÷ 4/3 oe or 56 ÷ 80 × 60
10(a)	064° to 068°	B1	
10(b)	25 000	B1	
10(c)	1 : 5000	B1	ft their (b) ÷ 5
11(a)	9	B2	M1 for 54/360 × 60
11(b)	204	B2	M1 for (360 - their 54) × 2/3 oe
12	158	B3	M1 for 8 × 5 or 8 × 3 or 5 × 3 M1 for 2(40 + 24 + 15)
13	e.g. -2, 1, 7, 8, 11 (accept 0, 9 or -1, 10 as the 2nd and 4th numbers)	B3	B1 for largest = 11 B1 for median 7 in the middle B1 for a sum of 25 (mean 5)
14	$x = 7$	B3	M1 for 12x - 20 = 64 or 3x - 5 = 16 M1 for correct rearrangement
15	4.61	B2	M1 for 95 ÷ 1.15 (= 82.60…) or 78 × 1.15 (= 89.70) then ÷ 1.15
16(a)	correct diagram 5:	B1	6 columns × 5 rows, outer columns grey
16(b)	grey: 8 and $2n$ white: 12 total: 20 and $n(n + 1)$ oe	B5	B1 for each of the five entries
16(c)	$n + 1$	B1	
16(d)	600	B2	M1 for $2n \leq 50$ giving n = 25
17(a)	377 or 376.99…	B2	M1 for $1/3 \times \pi \times 6^2 \times 10$
17(b)	176 m^2	B3	M1 for 1/2(18 + 26) × 8 A1 for 176, B1 for m^2

18(a)	correct ruled line from (-4, 0) to (4, 4)	**B2**	B1 for at least 3 correct points plotted
18(b)	$y = 5$	**B1**	
19	17.8 or 17.82 to 17.83	**B3**	M1 for 3.5 × 16 (= 56) M1 for their 56 ÷ π
20	$x = 32.7$ or 32.73 to 32.74	**B4**	M1 for 27.6 ÷ 2 (= 13.8) M1 for 13.8 - 8.4 (= 5.4) M1 for tan x = 5.4/8.4 oe
21(a)	t^4	**B1**	
21(b)	$15w^6$	**B2**	B1 for 15w^k or kw^6
22	20 758	**B3**	M1 for $16\,500 \times 1.039^6$ A1 for 20 757.6...
23	11 48	**B3**	M1 for listing multiples of 28 and 24 A1 for 168 (minutes) seen
24	16	**B2**	M1 for 986 - 850/850 × 100 oe
25	26	**B3**	M1 for height = 2 × 120/24 (= 10) M1 for $\sqrt{24^2}$ + their 10^2

M = method mark · A = accuracy mark · B = independent mark · FT = follow through

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