	Mathematics GCSE Calculator: Paper 1 Mark Scheme

Question Number	Marking Guidelines	Mark	Additional Information
1.(a)	(0) 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9 (1)	A1	All correct for the mark
1.(b)(i)	0.75	A1	Allow 0.74 - 0.76
1.(b)(ii)	Arrow with circle from 0.3 to 0 with arrow at 0 and circle at 0.3; Circle **not** filled in;	C1 C1	
2.(a)	7	A1	
2.(b)	$20 - 4x = x$; $x = 4$;	M1 A1	Or $5x = 20$.
2.(c)	$5x - 8 = 7$; $x = 3$;	M1 A1	
3.	$2y = 6x - 2$ or $y = \frac{5}{2} - \frac{1}{2}x$ seen; Equate both equations; Obtain $x = 1$; Obtain $y = 2$;	M1 M1 A1 A1	Or rearrange for x and obtain one of $3x = y + 1$ or $x = 5 - 2y$. Such as $6x - 2 = 5 - x$. (1, 2) seen gives A2. SC: (2, 1) gives A1.
4.	Any valid method to find lowest common multiple such as list of 16 and 20 times tables or factor trees; Obtain 80 State 68 (seconds)	 M2 A1 A1	Correct list of one of 16 or 20 times tables (at least first 4 numbers) gives M1. Only one **correct** factor tree gives M1
5.	6 × 4 × 4 seen or implied; 10 × 4 × d = 96 Obtain 2.4;	M1 M1 A1	May be implied by 96. Or their value from errors in multiplication in first step.

6.	$3\pi(x + y)$ = Length;	B1	
	$x^3(y + 4) \div x$ = Volume;	B1	
7.(a)	Internal angles in hexagon are 120° stated or implied;	B1	Or external angles are 60° stated or implied
	Internal angles in pentagon are 108° stated or implied;	B1	Or external angles are 72° stated or implied
	108 + 120 + x = 360 or equivalent **OR** 60 + 72 = x;	M1	
	x = 132;	A1	
7.(b)	104;	A1	
8.(a)	① **❷** ③ ④⑤ Graph 2 selected;	C1	Exponential graph in middle of top row selected.
8.(b)	(1 ×) 4 × 60;	M1	Or (1 ×) 240.
	240;	A1	Correct answer of 240 scores both marks even with no working.
9.	Obtain $2ax^2 + 2bx + 5ax + 5b$;	B1	
	State $a = 1$;	A1	
	State or imply $2b + 5a = 1$;	M1	Or $2b + 5(1) = 1$.
	obtain $b = -2$ **and** $c = -10$;	A1	

10.(a)	$\frac{x}{360} \times 10\pi = 2\pi$;	M1	Correct substitution.
	Obtain $\frac{x}{36} = 2$;	M1	
	Hence multiply by 36 to obtain $x = 72$;	M1	Necessary detail needed as answer given.
10.(b)	$\frac{x}{360} \times \pi r^2$;	M1	Use correct formula.
	$\frac{72}{360} \times 25\pi$ or equivalent;	M1	
	Obtain 5π;	A1	