

Translation of Graphs Past Paper Answers GCSE Edexcel – Non-Calculator

1.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	sketch	B1	for appropriate sketch which crosses the x axis at (2,0) and (4,0), minimum point at (3,-1) and end points at (1,3) and (5,3)	Allow some tolerance on the points if the intention is clear.
(b)	$y = g(-x)$	B1	cao	

2.

Graph drawn	C2	for graph translated by -2 in the y direction	Key points: (-180, -2), (-90, -3), (0, -2), (90, -1), (180, -2)
	(C1	for a graph translated in the y direction	
		OR for a correct graph through four of the five key points)	

3.

sketch	B1	for correct shape for $0 \leq x \leq 360$
	B1	for fully correct sketch with labels
sketch	B1	cao
sketch	B1	cao

4.

Sketch	P1	Parabola passes through all three of the points (0, 4), (2,0), (4, 4)
Sketch	P1	Parabola passes through all three of the points (-4, -1), (-2,2), (0, -1)

5.

Graph drawn	2	B2 correct graph drawn (B1 for a graph translated up/down)
Graph drawn	2	B2 for correct graph drawn (B1 for a graph reflected in the x axis or stretched by sf 2 parallel to the y axis)

6.

Question	Modification	Notes
(a) (i)	Diagram enlarged. Cross changed to filled in circle.	B1 cao
(a)(ii)	Diagram enlarged. Cross changed to filled in circle.	B1 cao
(a)(iii)	Diagram enlarged. Cross changed to filled in circle.	B1 cao
(b)	Diagram enlarged. Cross changed to filled in circle.	B1 for a correct transformation, eg. translation of $\begin{pmatrix} 0 \\ -4 \end{pmatrix}$ or translation of 4 units in the negative y -direction, oe.

7.

(3, -1)	3	B1 cao
(1.5, -4)		B1 for (1.5, -4) accept 1.5 or $1\frac{1}{2}$ or $\frac{3}{2}$ for x coordinate
(-3, -4)		B1 cao