

4 Curve C has equation $y = 8 \sin x$

4 (a) Curve C is transformed onto curve C_1 by a translation of vector $\begin{bmatrix} 0 \\ 4 \end{bmatrix}$
Find the equation of C_1 [1 mark]

4 (b) Curve C is transformed onto curve C_2 by a stretch of scale factor 4 in the y direction.
Find the equation of C_2 [1 mark]

4 (c) Curve C is transformed onto curve C_3 by a stretch of scale factor 2 in the x direction.
Find the equation of C_3 [1 mark]