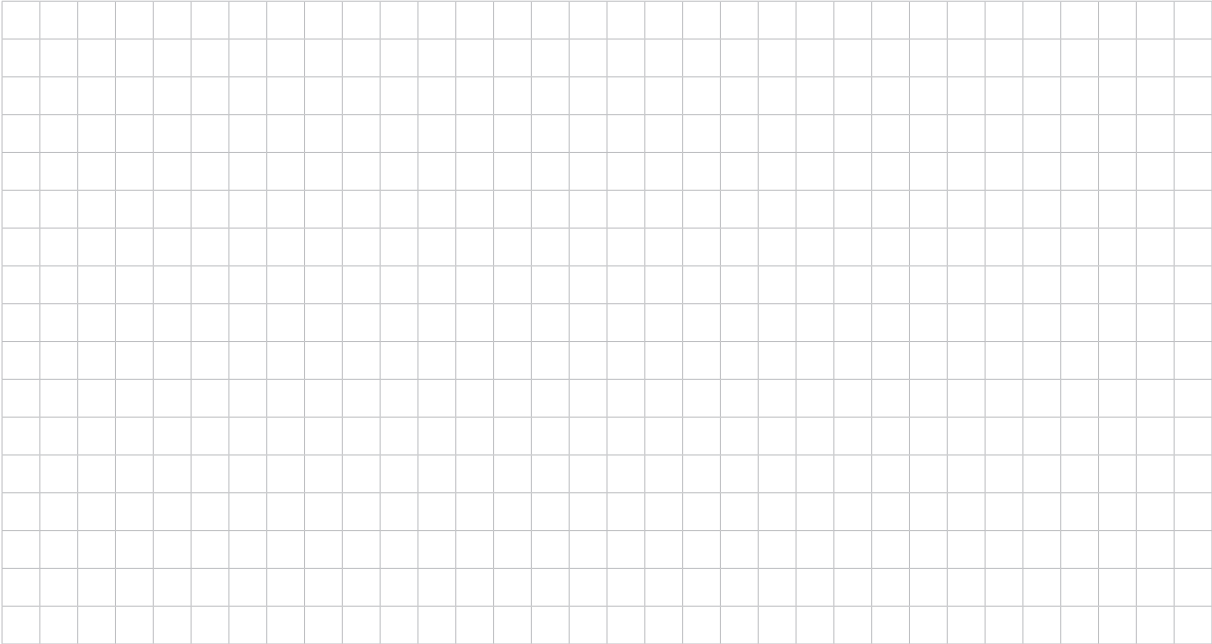


(b) The shape of the pearl can be obtained by rotating the curve in Figure 2 about the x -axis for $0 \leq x \leq \pi$.

Show that, according to the model, the exact volume of the pearl is π^2 cubic units.



(3 marks)