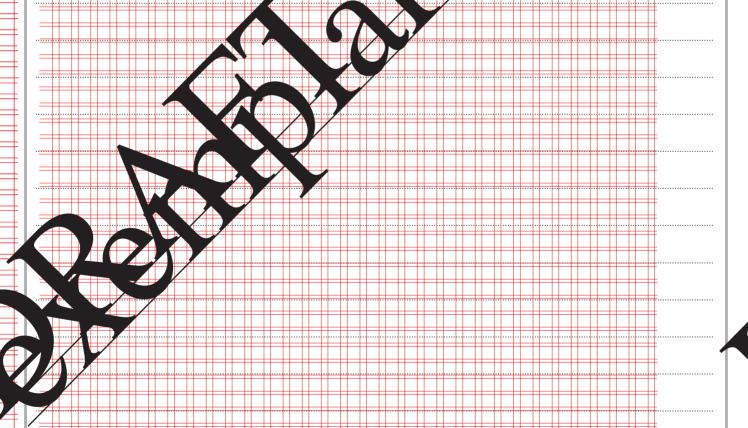
2 A solid right circular cylinder has height h cm and base radius r cm. The total surface area of the cylinder is S cm² and the volume of the cylinder is V cm³

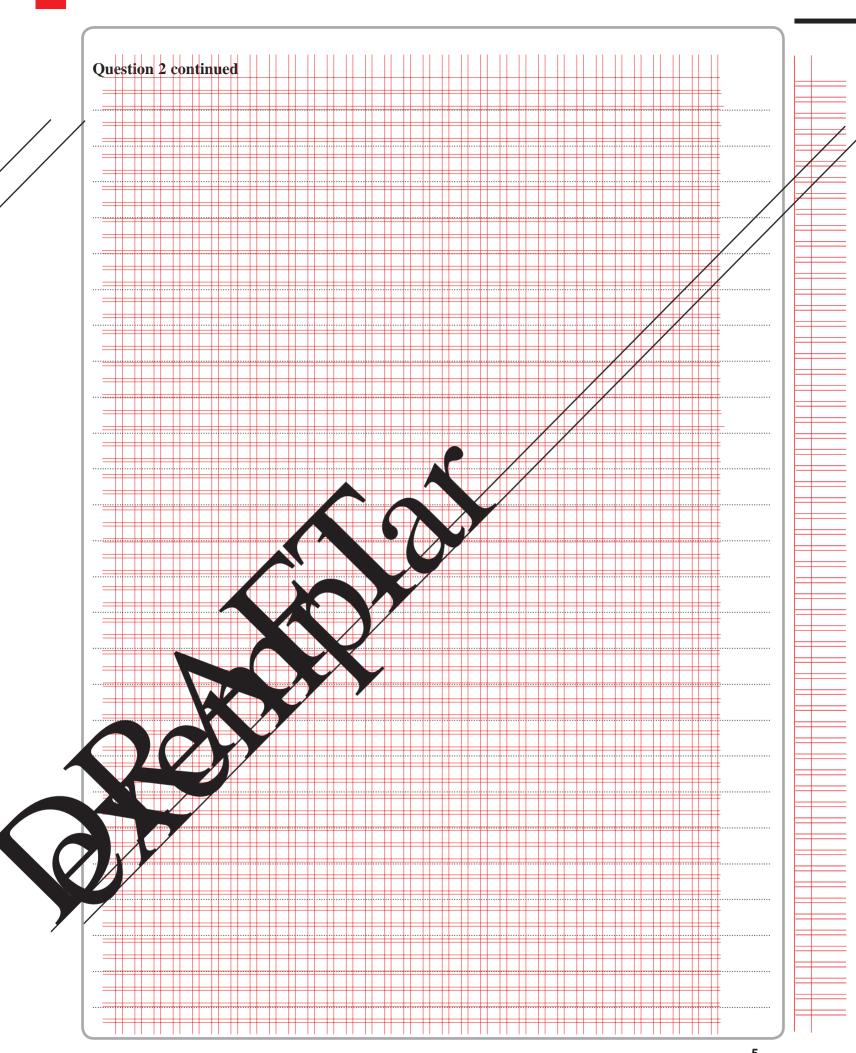
(a) Show that 
$$S = \frac{2V}{r} + 2 r^2$$

Given that V = 1600

(b) find, to 3 significant figures, the minimum value of *S*.

Verify that the value you have found is a minimum.









(Total for Question 2 is 9 marks)