

- 4 The surface area of a sphere with radius  $r$  cm is increasing at a constant rate of  $50\pi \text{ cm}^2/\text{s}$

Find, in  $\text{cm}^3$ , the exact volume of the sphere at the instant when the rate of increase

of  $r$  is  $\frac{5}{12} \text{ cm/s}$

(8)

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Question 4 continued

Handwriting practice area with horizontal dotted lines.

(Total for Question 4 is 8 marks)

