2 Sand is poured onto horizontal ground at a rate of $50\,cm^3/s$. The sand forms a right circular cone with its base on the ground. The volume of the cone increases in such a way that the radius of the base is always three times the height of the cone. Find the rate of change, in cm/s to 3 significant figures, of the radius of the cone when the radius is 10 cm.

(5)

Question 2 continued

(Total for Question 2 is 5 marks)