

- 6** A small trading company made a profit of \$250 000 in the year 2000. The company considered two different plans, plan *A* and plan *B*, for increasing its profits.

Under plan *A*, the annual profit would increase each year by 5% of its value in the preceding year. Find, for plan *A*,

(i) the profit for the year 2008, [3]

(ii) the total profit for the 10 years 2000 to 2009 inclusive. [2]

Under plan *B*, the annual profit would increase each year by a constant amount \$*D*.

(iii) Find the value of *D* for which the total profit for the 10 years 2000 to 2009 inclusive would be the same for both plans. [3]