

7 Business A made a £5000 profit during its first year.
In each subsequent year, the profit increased by £1500 so that the profit was £6500 during the second year, £8000 during the third year and so on.

Business B made a £5000 profit during its first year.

In each subsequent year, the profit was 90% of the previous year's profit.

- (a) Find an expression for the total profit made by business A during the first n years.
Give your answer in its simplest form. [2]
- (b) Find an expression for the total profit made by business B during the first n years.
Give your answer in its simplest form. [3]
- (c) Find how many years it will take for the total profit of business A to reach £385 000. [3]
- (d) Comment on the profits made by each business in the long term. [2]