

7. In a simple model, the value, $\pounds V$, of a caravan depends on its age, t , in years.

The following information is available for caravan A .

- Its value when new is $\pounds 13\,000$
- Its value after one year is $\pounds 5\,900$

(a) Use an exponential model to form, for caravan A , a possible equation linking V with t . (4)

The value of caravan A is monitored over a 3-year period.

Its value after 3 years is $\pounds 1100$

(b) Evaluate the reliability of your model in light of this information. (2)

The following information is available for caravan B

- It has the same value, when new, as caravan A
- Its value depreciates more slowly than that of caravan A

(c) Explain how you would adapt the equation found in part (a) so that it could be used to model the value of caravan B . (1)

(Total for Question 7 is 7 marks)