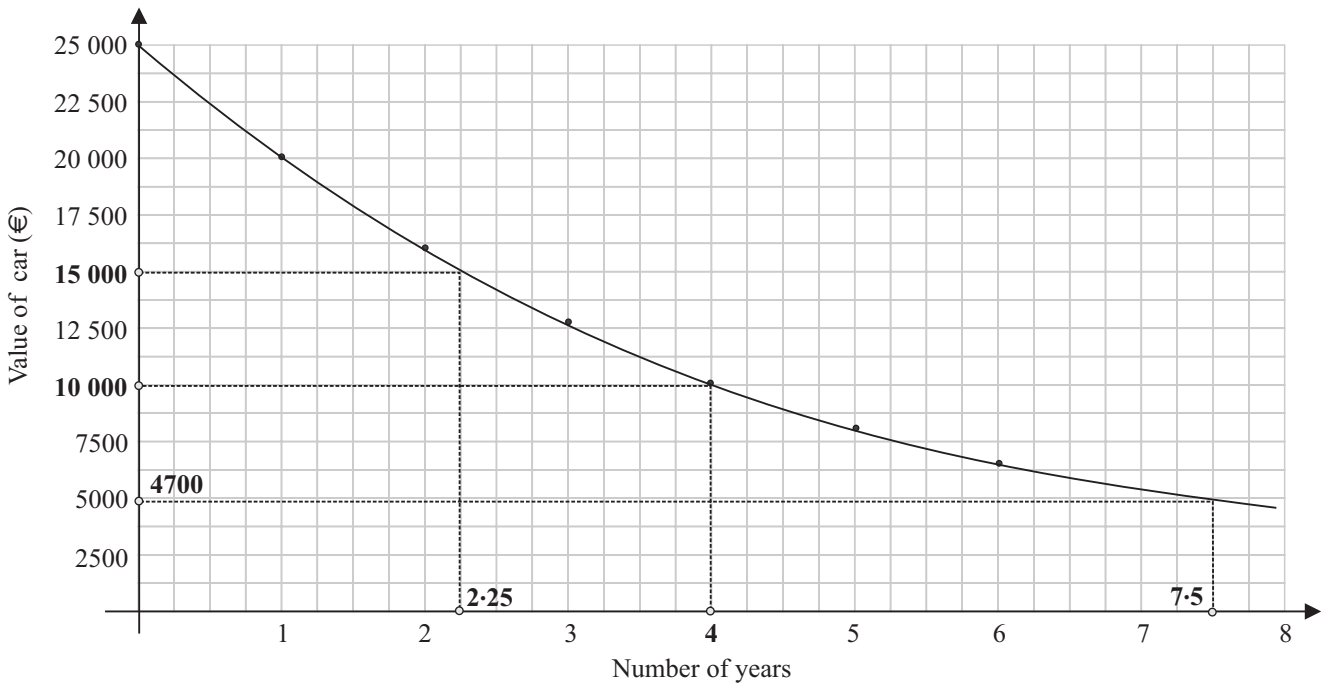


LC 2015 (SET B): PAPER 1

QUESTION 9 (30 MARKS)

Question 9 (a)



- (i) It takes $4 - 2.25 = 1.75$ years for Amanda's car to depreciate from €15 000 to €10 000.
- (ii) After 7.5 years, the approximate values of Amanda's car is €4700.
- (iii) The graph above is an **exponential** graph.

MARKING SCHEME NOTES

Question 9 (a) (i) [Scale 15B (0, 3, 15)]

- 3:
- 10 000 or 15 000 indicated on graph, with no further work
 - One value read correctly
 - Answer between 1.55 and 2.05 (inclusive), without work

Question 9 (a) (ii) [Scale 5A (0, 5)]

Question 9 (a) (iii) [Scale 5A (0, 5)]

Question 9 (b)

Amanda

15 km → €1.50 (1 litre)

$$1 \text{ km} \rightarrow \frac{\text{€}1.50}{15} = \text{€}0.10$$

Amanda: Cost of car = €25 000

Cost of fuel per kilometre = €0.10

Let x = Distance travelled (km)Total cost = 25 000 + 0.1 d

Cathal

10 km → €1.50 (1 litre)

$$1 \text{ km} \rightarrow \frac{\text{€}1.50}{10} = \text{€}0.15$$

Cathal: Cost of car = €22 500

Cost of fuel per kilometre = €0.15

Let d = Distance travelled (km)Total cost = 22 500 + 0.15 d

$$25\,000 + 0.1d = 22\,500 + 0.15d$$

$$25\,000 - 22\,500 = 0.15d - 0.1d$$

$$2500 = 0.05d$$

$$\therefore d = \frac{2500}{0.05} = 50\,000 \text{ km}$$

MARKING SCHEME NOTES**Question 9 (b) [Scale 5B (0, 3, 5)]**

3: • 2500 written

• 1 or 2 costs per km found (Amanda and/or Cathal)