Marked example 2

Paper 2 style · Graphic display calculator

2 4 marks SL 1.4 ●○○ Routine

A car is bought for 28 000 euros. Its value decreases by 12 % each year.

(a) Find the value of the car after 5 years, to the nearest euro. **[2]**

(b) Find the number of complete years after which the value of the car is first less than 10 000 euros. **[2]**

MARKSCHEME (a)

$28\,000 \times 0.88^5$ **(M1)**

14 776 euros $(14\,776.49\ldots)$ **A1**

Total 2 marks

MARKSCHEME (b)

$28\,000 \times 0.88^n < 10\,000,\ n > 8.05$ **(M1)**

9 years **A1**

Total 2 marks

Note Or after 8 years 10 070, after 9 years 8 861.

Written and verified by a practising IB mathematics teacher, produced with AI assistance; solved twice and recomputed by software. Not affiliated with or endorsed by the International Baccalaureate Organization. © 2026 Hence