Marked example 1

Paper 2 style · Graphic display calculator

1 5 marks SL 1.4 ●●○ Typical

Aiko invests 5000 euros in an account that pays a nominal annual interest rate of 3.5 %, compounded monthly.

(a) Find the value of the investment after 8 years, to the nearest euro. **[2]**

(b) Find the number of complete years needed for the value to exceed 7000 euros. **[3]**

MARKSCHEME (a)

$5000\left(1+\frac{3.5}{1200}\right)^{96}$ **(M1)**

6613 euros $(6612.95\ldots)$ **A1**

Total 2 marks

Note Or the finance solver: $N = 96$, $I\% = 3.5$, $PV = -5000$, $P/Y = C/Y = 12$.

MARKSCHEME (b)

$5000\left(1+\frac{3.5}{1200}\right)^{12n} > 7000$ **(M1)**

$n > 9.63$ $(9.6275\ldots)$ **(A1)**

10 years **A1**

Total 3 marks

Note Or after 9 years 6848, after 10 years 7092.

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