# Marked example 3

Paper 2 style · Graphic display calculator

## 3 5 marks SL 1.4 ●●○ Typical

Bruno wants 4000 euros to become 5000 euros in 6 years, in an account with interest compounded quarterly.

**(a)** Find the nominal annual interest rate he needs, to two decimal places. **[3]**

**(b)** Inflation is expected to be 2 % per year. Find the real value, in today's money, of 5000 euros in 6 years, to the nearest euro. **[2]**

**MARKSCHEME (a)**

$4000\left(1+\frac{r}{400}\right)^{24}=5000$ **M1**

$r=3.736\ldots$ **(A1)**

$3.74\,\%$ **A1**

**Total 3 marks**

**Note** Or the finance solver: $N=24$, $PV=-4000$, $FV=5000$, $P/Y=C/Y=4$.

**MARKSCHEME (b)**

$\frac{5000}{1.02^6}$ **(M1)**

4440 euros $(4439.86\ldots)$ **A1**

**Total 2 marks**



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