

Question 18 **C**

Substitute into the financial section of your calculator. $PV = -230\,000$, $FV = 0$, $r = 5\%$, $n = 120$ and there are 12 repayments per year. Solve to find the repayment.

Question 19 **E**

$$R = 1 - \frac{r}{100}$$

$$= 0.977$$

This rate is multiplied by the balance each year for 4 years.

Thus $M_4 = M_0 \times 0.977 \times 0.977 \times 0.977 \times 0.977$.

Question 20 **D**

The key here is simple interest. The simple interest for 4 years is $2000 \times 0.05 \times 4$. This must be added to the original principal to get the balance after 4 years.

Question 21 **A**

The y -intercept is 18 and therefore $P_0 = 18$. The value of each term reduces by 2, so $P_{n+1} = P_n - 2$.

Question 22 **D**

$$R = 1 + \frac{r}{100} = 1.04, \quad t_0 = 25\,000$$

The multiplication by 1.04 must be followed by an addition of 10 000 in that order.

Question 23 **E**

Substitute into the formula for effective interest rate.

$$r_{\text{effective}} = \left[\left(1 + \frac{r}{100n} \right)^n - 1 \right] \times 100\%$$

$$= \left[\left(1 + \frac{4.5}{100 \times 12} \right)^{12} - 1 \right] \times 100\% = 4.59\%$$

Question 24 **A**

Calculate using the financial package on the calculator for $n = 5 \times 365$ with $r = \frac{5}{365}$ and $n = 60$ with $r = \frac{5}{12}$. The difference is closest to \$16.12.