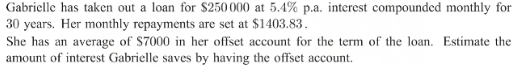
**Year 12 General Mathematics - Loans**

**8C.6 Question 1 – calculations**



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| --- | --- | --- |
| **Question Section** | **Formula and calculations** | **Answer** |
| 1. Step 1 – find the time taken to reduce the loan   $250,000 - $7000 (Offset account) = $243,000 | **N =0**  I = 5.4  PV = 243000  PMT = -1403.83  FV = 0  P/Y = 12  C/Y = 12 | **N = 336 or 28 years**  This is the number of payments calculated to pay off this loan amount less the offset amount of $7000. |
| 1. Find the future value (FV) of the loan after 28 years. | N =336  I = 5.4  PV = 243000  PMT = -1403.83  **FV = 0**  P/Y = 12  C/Y = 12 | FV = $223 |
| 1. Final calculations | So Gabrielle will need to pay $7000 - $223 = **$6777**  With the offset Gabrielle will pay:  $1403.83 x 336 + $6777 = **$478,463.88**  Without the offset she will pay:  $1403.83 x 360 = **$505,378.80**  $505,378.80 - $478,463.88 = **$26,914.92 savings** | |