

12. Adam is interested in opening a savings account at Morris Bank. The manager of Morris Bank explains to Adam that they have two different savings accounts. Some details of the accounts are shown below.

Account	Nominal interest rate	AER Annual Equivalent Rate, correct to 2 decimal places
Quarter Back	8.6% p.a., paid quarterly%
Monthly Goal	5.4% p.a., paid monthly	5.54%

- (a) (i) In the table above, complete the AER column in the table for the Quarter Back account using the information given below.

AER, as a decimal, is calculated using the formula $(1 + \frac{i}{n})^n - 1$, where i is the nominal interest rate per annum as a decimal and n is the number of compounding periods per annum.

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- (ii) Explain why AER is used by the bank.

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- (b) Adam decides to invest £350 in the Monthly Goal account for 3 years.
The account pays an AER rate of 5.54% p.a.
Will Adam have sufficient money in his Monthly Goal account to buy a motor scooter for £410 in 3 years time?
You must show all your working and give a reason for your answer.

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