Question 37 (3 marks)

Wilma deposited a lump sum into a new bank account which earns 2% per annum compound interest. **3**

Present value interest factors for an annuity of $1 for various interest rates (r) and numbers of periods (N) are given in the table.

Table of present value interest factors

r / N	*Interest rate per period as a decimal*			
	0.01	0.015	0.02	0.025
10	9.471	9.222	8.983	8.752
20	18.046	17.169	16.351	15.589
30	25.808	24.016	22.396	20.930

Wilma was able to make the following withdrawals from this account.

- $1000 at the end of each year for twenty years (starting one year after the account is opened)
- $3000 each year for ten years starting 21 years after the account is opened.

Calculate the minimum lump sum Wilma must have deposited when she opened the new account.

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