

The Amount of an Ordinary Annuity

Date: _____

An *annuity* is a sequence of equal payments made at equally spaced intervals of time.

The *period of an annuity* is the time interval between two consecutive payments.

The *term of an annuity* is the total time involved in completing the annuity.

Ordinary annuities have payments made at the end of the payment period.

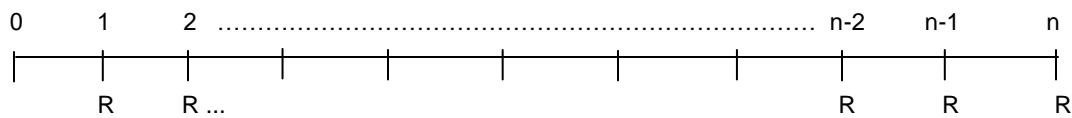
A : Amount of the annuity

R : Regular payment

i : the adjusted interest rate (interest per annum \div the number of compounding periods in a year)

n : Number of payments in total

We will use a *timeline* to visualize the money in an annuity and derive a formula for the future value of an ordinary annuity after n compounding periods.



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Ex. 1 Finding the amount of an annuity.

If you were to save \$100 per month, earning 3% per annum, compounded monthly, then how much would you have saved at the end of 6 years?

Ex. 2 Finding the monthly payment of an annuity.

Sarah wants to buy a home theatre system for her grandfather's retirement in three years. She estimates that she would spend \$4000, including taxes, where she can earn 5% per annum, compounded monthly. How much would she have to save monthly to reach this goal?