

3.2 Ordinary Annuity



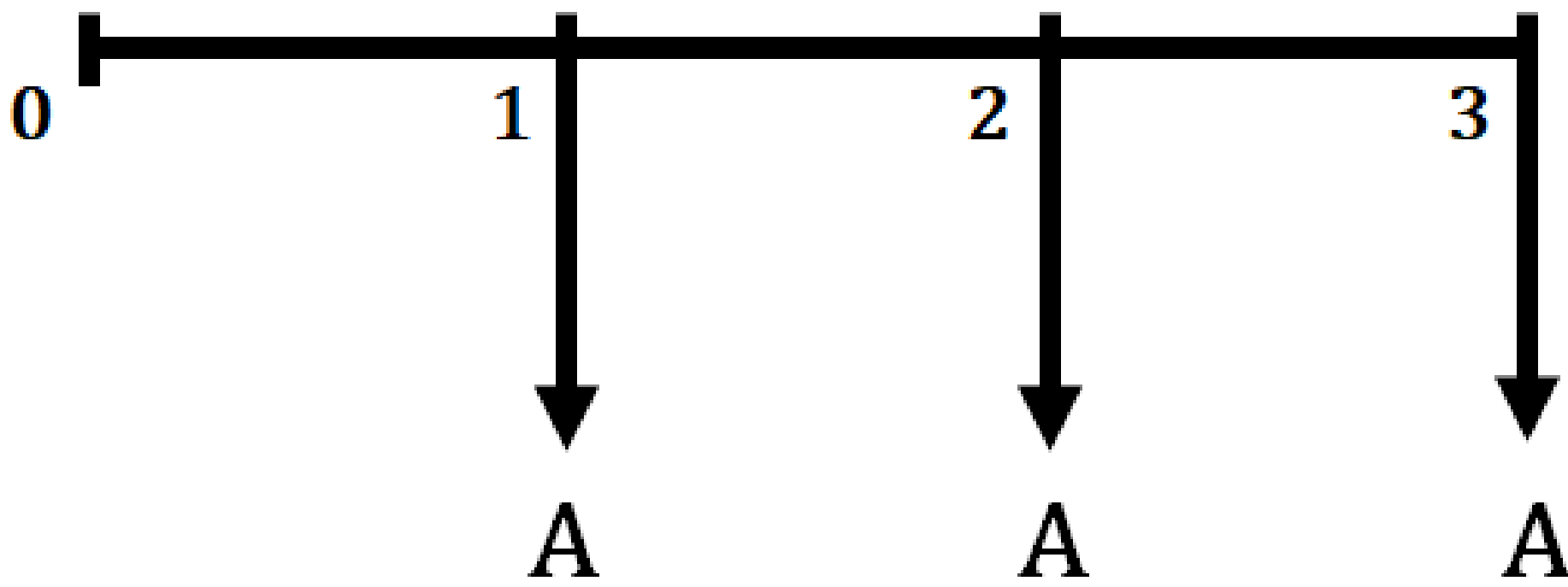
Intended Learning Outcome

At the end of the lesson, the student shall be able to:

- 1. Apply formulas/equations in ordinary annuity to solve word problems.

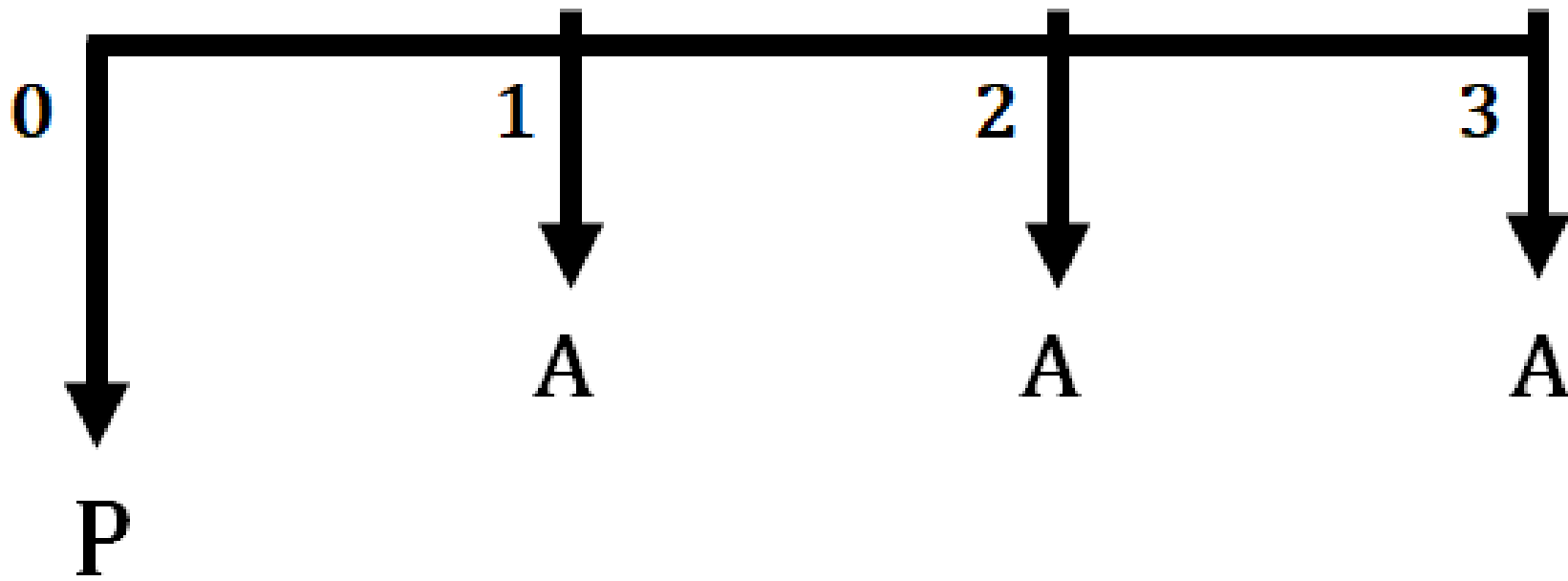
ORDINARY ANNUITY

- A type of annuity where the first payment is made at the end of the first period and all payments thereafter are made at the end of each corresponding period.
- Compound interest is paid on all amounts in the annuity.



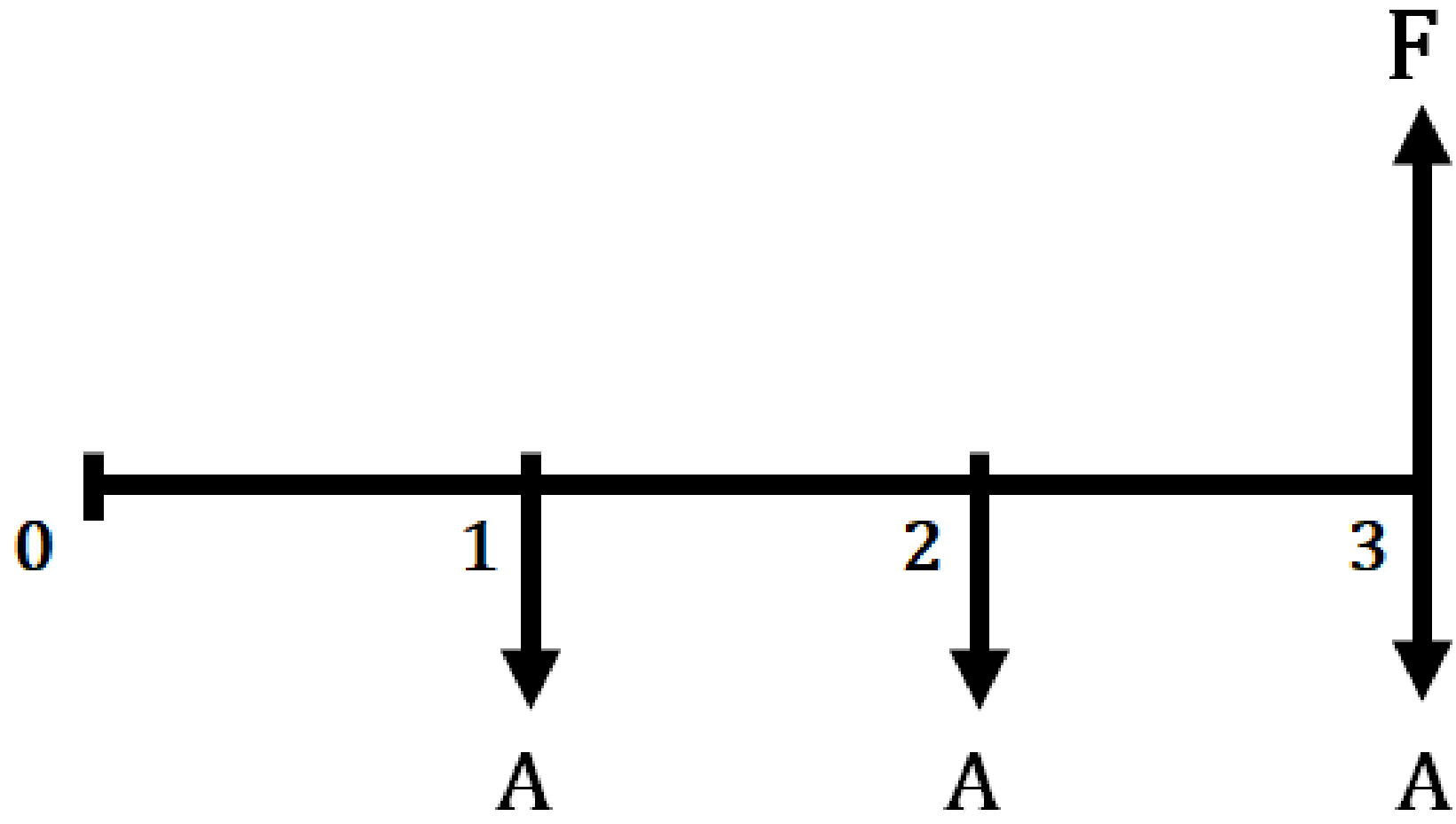
Cash Flow Diagram for a 3-Year Ordinary Annuity

PRESENT WORTH OF ORDINARY ANNUITY



$$P = A \left[\frac{(1+i)^n - 1}{i(1+i)^n} \right]$$
$$P = A \left[\frac{1 - (1+i)^{-n}}{i} \right]$$

FUTURE WORTH OF ORDINARY ANNUITY



$$F = A \left[\frac{(1+i)^n - 1}{i} \right]$$

Reference: *Engineering Economics* by Hipolito Sta. Maria



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