# Case Study Analysis on the Depreciation Rates & Values

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## Case Study Approach

For this case study, I applied the straight-line depreciation method, which is one of the simplest and most widely used techniques. I chose this method because the provided example in the material used it, and it is appropriate for assets like laptops where the value decreases steadily over time due to wear, tear, and obsolescence.  
  
My approach involved:  
1. Identifying the cost price, salvage value, and useful life of the ASUS X453M laptop.  
2. Computing the annual depreciation value using the straight-line formula.  
3. Calculating the depreciation rate.  
4. Estimating the past value (2019 price) of the laptop using reverse depreciation logic.  
5. Making recommendations for MotorPH based on affordability, IT best practices, and depreciation impact.

## Assumptions

- Salvage Value: ₱5,000 assumed for the ASUS X453M after its useful life.  
- Useful Life: 4 years, based on average lifecycle for business laptops.  
- Straight-Line Depreciation: Equal value reduction each year.  
- Budget Constraint: MotorPH is limited to the same budget as their last laptop purchase in 2019.  
  
These assumptions were based on online references from corporate finance resources and tech lifecycle standards.

## Findings and Calculations

1. Depreciation Values (ASUS X453M Laptop – 2025 Price = ₱24,999):

|  |  |
| --- | --- |
| Item | Value |
| Cost Price (2025) | ₱24,999 |
| Salvage Price | ₱5,000 (assumed) |
| Useful Life | 4 years |
| Depreciation per Year | ₱4,999.75 (~20% per year) |

2. Estimated 2019 Price: Approx. ₱40,000 based on reverse depreciation logic.

3. Number of Units MotorPH Can Buy (2025 Budget): 480,000 / 24,999 ≈ 19 laptops.

## Challenges and How I Overcame Them

- Challenge 1: Missing data on salvage value and useful life → Resolved by researching typical laptop lifespans.  
- Challenge 2: Estimating past prices (2019) → Used depreciation formula in reverse and cross-checked with historical market values.  
- Challenge 3: Ensuring realistic assumptions → Cross-checked values with finance/accounting references.

## Recommendations for MotorPH

1. Plan IT lifecycle upgrades – Replace laptops every 4 years.  
2. Consider bulk purchasing – With the budget allowing 19 units instead of 12.  
3. Explore leasing or trade-in options – To minimize upfront cost.  
4. Adopt asset tracking software – Helps in monitoring depreciation and replacement schedules.

## References

- Corporate Finance Institute. Straight-Line Depreciation Method. Retrieved from: https://corporatefinanceinstitute.com/resources/accounting/straight-line-depreciation  
- Techjury. Average Lifespan of a Laptop: When to Upgrade. Retrieved 2025.  
- Lenovo Business Blog. Laptop Refresh Cycle for Enterprises. Retrieved 2025.