

Home













Second Semester SY 2020-2...

Conferences

Announcements

Grades

Office 365

Chat

T.I.P. Manila Library **Video Presentation**

[SHS ONLY] Senior **Highschool Teachers** Online Class Performance **Evaluation (Manila:** Part 5)[Required]

Student Perception on Limited F2F Survey (Required)

Modules 6.1 Sum-of-the-Years Digit Method



DEPRECIATION

Engr. Feb June R. Gogola

Immersive Reader

Intended Learning Outcomes

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

- 1. Describe how the sum-of-the-years digit method works as a depreciation method.
- 2. Apply the formulas/equations in a sum-of-the-years digit method to solve word problems.

SUM-OF-THE-YEARS DIGIT METHOD

In this method, it provides very rapid depreciation during the early years of life of the property and therefore enables faster recovery of capital.

The basic assumption for the method is that the value of the property decreases at a decreasing rate.

Useful Equations/Formulas

Sum of the Years

If "L" is the life of the property in years, and noting that the digits 1, 2, 3, . . . , (L - 1), L form an arithmetic progression, then

$$\Sigma \, Years \, = rac{L}{2}(L+1)$$

Reverse Digit

This is also the remaining useful life of the property or equipment at the beginning of each year.

n	1	2	3	• • •	L - 1	L
RD	L	L - 1	L - 2		2	1

$$RD = L - n + 1$$

Annual Charge/Depreciation Cost

$$d_n = \left(C_O - C_L
ight)\left(rac{RD}{\sum Years}
ight)$$

$$egin{aligned} d_1 &= (C_O - C_L) \left(rac{L}{\sum Years}
ight) \ d_2 &= (C_O - C_L) \left(rac{L-1}{\sum Years}
ight) \ &dots \ d_L &= (C_O - C_L) \left(rac{1}{\sum Years}
ight) \end{aligned}$$

Total Depreciation Cost

$$D_n = \sum d_n$$

$$D_n = rac{C_O - C_L}{\Sigma Years} (\Sigma R D_n)$$

Book Value

$$C_n = C_O - D_n$$

where:

 $d_n \longrightarrow depreciation\ cost\ at\ n^{th}\ year$

 $C_O \longrightarrow original \ or \ first \ cost$

 $C_L \longrightarrow book \ value \ at \ the \ end \ of \ life \ of \ the \ property$

 $\longrightarrow salvage\ or\ scrap\ value$

 $L \longrightarrow useful \ life \ of \ the \ property \ in \ years$

 $D_n \longrightarrow total\ depreciation\ up\ to\ "n"\ years$

 $C_n \longrightarrow book \ value \ at \ the \ end \ of \ " \ n " \ years$

Reference: Engineering Economics by Hipolito Sta. Maria



Proprietary Clause

Property of the Technological Institute of the Philippines (T.I.P.). No part of the materials made and uploaded in this learning management system by T.I.P. may be copied, photographed, printed, reproduced, shared, transmitted, translated or reduced to any electronic medium or machine-readable form, in whole or in part, without prior consent of T.I.P.