
MS Excel Depreciation

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Depreciation

- **Depreciation** is a term used to describe the reduction in the value of an asset over a number of years.
 - A **Depreciation Schedule** is a table that shows the depreciation amount over the span of the asset's life.
 - For accounting and tax purposes, the **depreciation expense** is calculated and used to "write-off" the cost of purchasing high-value assets over time.
 - Usually a company will want to write-off the asset (meaning turn the cost into an expense) as soon as possible in order to increase the after-tax present worth, or **profitability**, of an asset.
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Depreciation Types

- ***Straight Line Depreciation (SLN)***- Returns the straight-line depreciation of an asset for one period.

Syntax

- **SLN(cost,salvage,life)**
 - **Cost** is the initial cost of the asset.
 - **Salvage** is the value at the end of the depreciation (sometimes called the salvage value of the asset).
 - **Life** is the number of periods over which the asset is depreciated (sometimes called the useful life of the asset).
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Declining Balance (DB)

- Returns the depreciation of an asset for a specified period using the fixed-declining balance method.

Syntax

- **DB(cost,salvage,life,period,month)**
 - **Cost** is the initial cost of the asset.
 - **Salvage** is the value at the end of the depreciation (sometimes called the salvage value of the asset).
 - **Life** is the number of periods over which the asset is being depreciated (sometimes called the useful life of the asset).
 - **Period** is the period for which you want to calculate the depreciation. Period must use the same units as life.
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- **Month** is the number of months in the first year. If month is omitted, it is assumed to be 12.

Double Declining Balance

- Returns the depreciation of an asset for a specified period using the double-declining balance method or some other method you specify.

Syntax

- **DDB(cost,salvage,life,period,factor)**
 - **Cost** is the initial cost of the asset.
 - **Salvage** is the value at the end of the depreciation (sometimes called the salvage value of the asset). This value can be 0.
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Double Declining Balance cont

- **Life** is the number of periods over which the asset is being depreciated (sometimes called the useful life of the asset).
 - **Period** is the period for which you want to calculate the depreciation. Period must use the same units as life.
 - **Factor** is the rate at which the balance declines. If factor is omitted, it is assumed to be 2 (the double-declining balance method).
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Sum of Year Digits

- Returns the sum-of-years' digits depreciation of an asset for a specified period.

Syntax

- **SYD(cost,salvage,life,per)**
 - **Cost** is the initial cost of the asset.
 - **Salvage** is the value at the end of the depreciation (sometimes called the salvage value of the asset).
 - **Life** is the number of periods over which the asset is depreciated (sometimes called the useful life of the asset).
 - **Per** is the period and must use the same units as life.
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Units of Production Method

- The unit of production method is a method of calculating the depreciation of the value of an asset over time.
 - It becomes useful when an asset's value is more closely related to the number of units it produces rather than the number of years it is in use.
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Syntax

Depreciation is calculated
using the formula given
below

**Depreciation = (Asset Cost - Residual
Value) / Life-Time Production Units *
Units Produced**

Case Example One

- A prominent business man in your Village would like to invest in a Grinding Mill Business and he has sought for your advice. The cost of the grinding machine is **UGX 30,000,000**. The Machine is expected to be sold off at a scrap value of **UGX 1500,000** at the end of the 5 years. The owner expects to finance the Investment using a loan from a local SACCO of **UGX 30,000,000** at 18% interest rate per annum for 5 years.
 - As a knowledgeable student in this area, you have been consulted on this prospect.
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Case Example

- Using Cell fixing and Cell Referencing, Build a complete depreciation schedule on different sheets to determine the annual depreciation expenses for the machine using the following methods;
 - i) Straight Line Method (SLN)
 - ii) Declining balance method (DB)
 - iii) Double declining Balance (DDB)
 - iv) Sum of Year Digits method (SYD)
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Case Example Two

- Asset depreciation answers the question, “How much does the asset cost per period?” To answer this question we build depreciation tables or schedules to allocate the depreciation per period. In light of this statement suppose your SACCO purchases a computer for 2,000,000, uses it for five years, and then sells it for 500,000 at the end of the five years and your SACCO policy is depreciated equipments in the organization using sum of year digits depreciation method.
- **Required,** In sheet two of your work book design a depreciation table to determine depreciation for the computer over the five year period. Your table should include Period, depreciation accumulated depreciation and net book value. Name the sheet as depreciation.

Case Example Three

- Let us take the example of plant machinery worth \$3.50 million with an estimated useful life of 10 years and a residual value of \$0.20 million. The machinery is expected to produce 200,000 units over its useful life of 10 years. Calculate the depreciation for the first 2 years under: **Straight line, Units of Production and Double Declining Balance Method**
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Case Example Three

Asset Cost	\$3,500,000
Residual Value	\$200,000
Useful Life of Asset (Years)	10
Life-Time Production (Units)	200,000
Units Produced in Year 1	16,000
Units Produced in Year 2	20,000

Case Example Four (Try Out)

- Let us take the example of plant machinery worth 150 million with an estimated useful life of 10 years and a residual value of UGX82 million. The machinery is expected to produce 110,000 units over its useful life of 10 years. Calculate the depreciation for the first 3 years under: Straight line, Units of Production and Double Declining Balance Method
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Case Example Two

Asset Cost	UGX 150,000,000
Residual Value	UGX 82,000,000
Useful Life of Asset (Years)	15
Life-Time Production (Units)	110,000
Units Produced in Year 1	16,000
Units Produced in Year 2	19,000
Units Produced in Year 3	22,000
