How can I use the VDB function in Excel to calculate the depreciation of an asset over time?

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The VDB (Variable Declining Balance) function in Excel is a useful tool for calculating the depreciation of an asset over a period of time. This function allows users to input the initial cost, salvage value, and useful life of the asset, and then calculate the depreciation amount for each period based on a chosen depreciation rate. By utilizing the VDB function, users can easily track and monitor the value of their assets and accurately reflect their depreciation in financial statements. This function is particularly helpful for businesses and individuals who need to accurately calculate and record the depreciation of assets for tax and accounting purposes.

This article describes the formula syntax and usage of the **VDB** function in Microsoft Excel.

Description

Returns the depreciation of an asset for any period you specify, including partial periods, using the double-declining balance method or some other method you specify. VDB stands for variable declining balance.

Syntax

VDB(cost, salvage, life, start_period, end_period, ,)

The VDB function syntax has the following arguments:

Cost Required. The initial cost of the asset.

Salvage Required. The value at the end of the depreciation (sometimes called the salvage value of the asset). This value can be 0.

Life Required. The number of periods over which the asset is depreciated (sometimes called the useful life of the asset).

Start_period Required. The starting period for which you want to calculate the depreciation. Start_period must use the same units as life.

End_period Required. The ending period for which you want to calculate the depreciation. End_period must use the same units as life.

Factor Optional. The rate at which the balance declines. If factor is omitted, it is assumed to be 2 (the double-declining balance method). Change factor if you do not want to use the double-declining balance method. For a description of the double-declining balance method, see DDB.

No_switch Optional. A logical value specifying whether to switch to straight-line depreciation when

depreciation is greater than the declining balance calculation.

If no_switch is TRUE, Microsoft Excel does not switch to straight-line depreciation even when the depreciation is greater than the declining balance calculation.

If no_switch is FALSE or omitted, Excel switches to straight-line depreciation when depreciation is greater than the declining balance calculation.

Important: All arguments except no_switch must be positive numbers.

Example

Copy the example data in the following table, and paste it in cell A1 of a new Excel worksheet. For formulas to show results, select them, press F2, and then press Enter. If you need to, you can adjust the column widths to see all the data.

Data	Description	
2400	Initial cost	
300	Salvage value	
10	Lifetime in years	
Formula	**Description**	**Result**
=VDB(A2, A3, A4*365, 0, 1)	First day's depreciation. Excel automatically assumes that factor is 2.	$1.32
=VDB(A2, A3, A4*12, 0, 1)	First month's depreciation.	$40.00
=VDB(A2, A3, A4, 0, 1)	First year's depreciation.	$480.00
=VDB(A2, A3, A4*12, 6, 18)	Depreciation between the sixth month and the eighteenth month.	$396.31
=VDB(A2, A3, A4*12, 6, 18, 1.5)	Depreciation between the sixth month and the eighteenth month using a factor of 1.5 instead of the double-declining balance method.	$311.81
=VDB(A2, A3, A4, 0, 0.875, 1.5)	Depreciation for the first fiscal year that you own the asset, assuming that tax laws limit you to 150-percent depreciation of the declining balance. Asset is purchased in the middle of the first quarter of the fiscal year.	$315.00