

## Depreciation: Double-Declining-Balance (DDB) Method

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(Also known as 200% Declining-Balance Method)

Depreciation is the allocation of the cost of a plant or fixed asset (equipment, building, truck, etc.) to expense over the useful life of the asset. The double-declining balance (DDB) or 200% declining-balance method is an accelerated method of depreciation. Accelerated means that the amount of depreciation expense in the early years will be greater than the amount of depreciation expense under the straight-line method. The depreciation in later years will be less than the straight-line depreciation expense. The total depreciation expense over the life of an asset will be the same under any depreciation method: cost minus the estimated salvage value.

The "double" or "200%" means *two times* the straight-line rate of depreciation. However, it is *not* applied to the depreciable cost. Rather, the doubled rate is applied to the asset's *book value* at the beginning of each year. The asset's book value declines with each period's depreciation expense. An asset's *estimated salvage value* is *not* part of its book value. Therefore, the estimated salvage value is ignored in the calculation of the depreciation expense for the early years of an asset's life. *However, the depreciation will stop when the asset's book value is equal to the asset's salvage value.*

Generally, companies switch from the double-declining-balance method to the straight-line method when the annual DDB depreciation expense begins to be less than the original straight-line amount.

### Double-declining-balance depreciation (DDB) expense for a full year =

(Cost of asset *minus* the asset's **book value** at the beginning of the accounting period) *times* (the **straight-line depreciation rate X 2**)

Calculation of **double-declining-balance (DDB) depreciation expense** for one full year:

Cost of asset	\$ _____	<b>C</b>
<i>minus</i> Accumulated depreciation at beginning of period	\$ _____	<b>AD</b>
= Book value of asset at beginning of period	\$ _____	<b>BV</b> (C - AD)
<i>times</i> the DDB rate	_____ %	<b>DR</b> (see below)
= <b>DDB depreciation expense for full year</b>	<u><u>\$ _____</u></u>	<b>DE</b> (BV x DR)

### Journal entry for a full year's depreciation:

debit	Depreciation expense	_____	<b>DE</b>
credit	Accumulated depreciation	_____	<b>DE</b>

### Notes:

**DR** The DDB rate is two times the straight-line depreciation rate. An asset with a 25 year life will have a straight-line rate of 4% per year (100% / 25 yrs). The double-declining-balance rate will be 8% (4% X 2). An asset with a useful life of 10 years will have a straight-line rate of 10% per year (100% / 10 yrs) and its DDB rate will be 20% (10% X 2).

**DE** Plant assets purchased in the middle of the accounting year will have one-half of the full year depreciation expense in the year it is acquired.

The depreciation recorded in the general ledger and reported on the financial statements is usually different from the amounts reported on the company's tax return.

See **Filled-In Form D2** for an illustration.

Learn more about depreciation at [www.AccountingCoach.com](http://www.AccountingCoach.com)