What Is Depreciation and How Do You Calculate It?

Depreciation is the allocation of the cost of a fixed asset over a specific period of time. But how does depreciation affect your business? Read on as we explain depreciation basics.

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When your business purchases a big-ticket item such as a vehicle, a building, or equipment, you won’t be able to expense it immediately. Instead, you’ll want to depreciate the asset over its useful life.

Depreciation directly impacts your income statement and your balance sheet, and can indirectly impact your cash flow statement as well.

While it may be confusing at first, don’t let your confusion stop you from taking advantage of the tax breaks you can get by depreciating assets properly.

Overview: Depreciation definition

Depreciation can be one of the more confusing components of the accounting cycle. Used to properly allocate the cost of a fixed or tangible asset, depreciation is not really covered in basic accounting, but it’s something that every small business bookkeeper needs to understand.

If you’ve ever bought a new car, you know that the minute you drive it off the lot, the car depreciates in value. The same goes for any asset you purchase for your business.

Depreciation rules are established by the IRS and directly affect your business taxes at year’s end. It’s important to remember that depreciation is only calculated on fixed assets, as intangible assets are always amortized.
In order to understand depreciation, you need to be familiar with the following accounting terms:

- **Useful life**: The amount of time that the asset is deemed to be of use in the business
- **Cost**: Includes all associated expenses such as sales tax and shipping and handling
- **Salvage value**: The value of the asset after the useful life has expired; can represent what you may be able to sell the asset for

Considered an operating expense, depreciation is always a fixed cost, since in many cases the monthly depreciation expense will remain the same throughout the life of the asset, while other times it may change yearly.

Depreciation accounts are not included in your company’s gross profit total, though it’s important to remember to include depreciation expenses when preparing a budget or other financial projections in order to receive the tax breaks talked about earlier.

Also remember that depreciation expense needs to be added back in when calculating working capital for your business, since it is not a cash expense.

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**Types of depreciation**

There are two main depreciation methods: book and tax. The book method is what you use to track your assets, accumulated depreciation, and depreciation expense, while the tax method is typically required on your tax return.

For the book method of depreciation, there are four main depreciation methods that are used. They are:

1. **Straight-line depreciation**: The simplest calculation and used most frequently. Using straight-line depreciation, the value of the asset depreciates by the same amount each year until the value is zero.
2. **Double declining balance depreciation**: Used to depreciate items that lose value faster in the first few years than in later years, such as a vehicle.
3. **Sum-of-the-years digits depreciation**: Can be used as a way to accelerate depreciation in the early years of an asset. Sum-of-the-years depreciation is not
used as frequently because it can artificially reduce profits in the first years of depreciation and artificially raise profits in later years.

4. **Units of production depreciation:** Most frequently used in manufacturing businesses, and is frequently used when you need to depreciate equipment based on the number of hours used or the number of units that the equipment produces.

The method used by the IRS is called The Modified Accelerated Cost Recovery System (MACRS). MACRS requires that all depreciated assets be assigned to a specific asset class. You can find the detailed table in Publication 946, *How to Depreciate Property*, with the updated 2019 version expected soon.

MACRS allows you to track and record depreciation using either the **straight-line method** or the **double declining balance method**.

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**Examples of depreciation**

Let's say you purchase a large printing press for your publishing business. The machine costs $20,000 and is estimated to have a useful life of 10 years with a salvage value of $1,000, meaning after the end of its useful life, you expect to be able to sell the printing press for $1,000.

Here is how you would calculate depreciation for the printing press using the following methods:

**1. Straight-line depreciation**

The formula for calculating straight-line depreciation is:

\[(\text{Asset cost} - \text{salvage value}) \div \text{useful life} = \text{annual depreciation}\]

For the above transaction, the calculation is:

\[($20,000 - $1,000) \div 10 = $1,900\]

Finally, to determine the monthly accumulated depreciation and depreciation expense, do the following calculation:
$1,900 ÷ 12 = $158.33

In this example, the straight-line annual depreciation rate is about 10% per year.

2. Double declining depreciation

Double declining depreciation allows you to take double the amount that you would take using straight-line depreciation in the first year. Each subsequent year's amount would then be reduced, since the remaining amount to be depreciated is based on the book value rather than the original cost.

In other words, the first year that you calculate depreciation for the printing press using this method, the depreciation amount would be $4,000 since double declining depreciation does not factor in salvage value when calculating depreciation. The calculation would be as follows:

\[(2 \times 0.10) \times 20,000 = 4,000\]

To calculate your monthly depreciation amount, the formula is:

\[4,000 ÷ 12 = 333.33\]

That leaves a book value of $16,000 after the first year, which will be used to calculate the following year’s depreciation total:

\[(2 \times 0.10) \times 16,000 = 3,200\]

Your monthly total for year two would be:

\[3,200 ÷ 12 = 266.67\]

After year two, the book balance would be $12,800, which is what you would base year three’s depreciation calculation on.

3. Sum-of-the-years depreciation

More complicated than the first two methods, sum-of-the-years depreciation adds up the sum of all of the years of the useful life of the item. Because the printing press has a useful life of 10 years, you would add up the numbers like the following:

\[1+2+3+4+5+6+7+8+9+10 = 55\]
Unlike double declining depreciation, sum-of-the-years depreciation does consider salvage value when calculating depreciation, so your first year depreciation calculation would be:

\[(10 \div 55) \times \$20,000 - \$1,000 = \$2,636\]

Your monthly depreciation expense would be:

\[\$2,636 \div 12 = 219.67\]

Your calculation will be reduced each year, so the second year, your formula to calculate depreciation would be:

\[(9 \div 55) \times \$20,000 - \$1,000 = \$2,273\]

Year two’s monthly depreciation expense would be:

\[\$2,273 \div 12 = \$189.39\]

4. Units of production depreciation

Used only when calculating depreciation for equipment or machinery, units of production depreciation looks at the number of units produced or hours in operation in order to calculate depreciation totals.

For example, the maker of the recently purchased printing press has stated that the equipment can process 1,000,000 pieces of paper in its useful life.

The calculation starts with the cost minus the salvage value, and divides that number by the number of pages it can produce in its lifetime. Your initial calculation would be as follows:

\[\$19,000 \div 1,000,000 = 0.019\]

The result of 0.019 means that for every piece of paper produced, the machine will depreciate by $0.019.

If the machine processed 121,000 pieces of paper its first year, your depreciation calculation would be:

\[121,000 \times 0.019 = \$2,299\]
If you choose to depreciate the printing press monthly, you would need to simply do the same calculation based on the number of pages produced each month. For instance, if the printing press produced 13,000 in January, the calculation would be:

\[ 13,000 \times \$0.019 = \$247 \]

Remember that while you can use sum-of-the-years and units of production depreciation for your own books, you will have to use either straight-line or double declining depreciation methods when calculating depreciation for tax purposes.

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**How to record depreciation of assets for your small business**

In many cases, unless you have very sophisticated accounting software or a fixed assets module that will automatically calculate the depreciation rate for you, you will be calculating depreciation manually, and later entering it into the appropriate journal or as a journal entry in your accounting software.

**Method #1: By hand**

Recording depreciation will affect both your income statement and your balance sheet. Recording depreciation is considered an adjusting journal entry, which are the entries that are completed prior to running your [adjusted trial balance](#).

In many accounting software applications that do not have the capability to track fixed assets you’ll be recording depreciation expenses manually. To record depreciation manually, you will need to make the following journal entries:

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACCOUNT</th>
<th>DEBIT</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/31/2020</td>
<td>Fixed Assets — Printing press</td>
<td>$20,000</td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td></td>
<td>$20,000</td>
</tr>
<tr>
<td>DATE</td>
<td>ACCOUNT</td>
<td>DEBIT</td>
<td>CREDIT</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------------------</td>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>1/31/2020</td>
<td>To record the purchase of the printing press</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depreciation Expense</td>
<td>$158.33</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accumulated Depreciation — Printing Press</td>
<td></td>
<td>$158.33</td>
</tr>
<tr>
<td></td>
<td>To record monthly depreciation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When the asset is purchased, you will post that transaction to your asset account and your cash account. You will then need to create a contra asset account (an asset account with a credit balance) in order to track the depreciation.

Finally, you will need to debit the depreciation expense account in your general ledger and credit the accumulated depreciation contra-account for the monthly depreciation expense total.

**Method #2: Use accounting software**

Unless you have a fixed asset module or add-on application that works with your accounting software, you will still have to enter depreciation totals manually as a journal entry into your accounting software, using the same journal entries as those shown above.

For this reason, most small business owners will find that straight-line depreciation is the simplest method to use.
Why calculating depreciation is important for your small business

Though it’s not the simplest accounting transaction you’ll be processing, tracking depreciation can be beneficial for your business. Here are a few reasons why:

**Reduces taxes**

Tracking depreciation will lower the net income for your business, which in turn means that you will pay less in taxes. This is why it’s almost always worth the extra time to depreciate your assets.

**Provides investors with a good picture of asset use**

It’s important for investors or potential investors to examine all aspects of your business. Tracking depreciation allows investors to view asset usage and also gives them a heads-up when the life of an asset is close to ending.

**Take the time to depreciate your assets**

Yes, it takes some time to get the hang of it, and yes, it can be a little bit cumbersome, but taking the time to depreciate your assets will help your small business, providing you with good tax breaks along with more accurate financial statements.

While most small business accounting software does not offer depreciation calculation, they do make it easy to record both accumulated depreciation and depreciation expense. Be sure to check out The Blueprint’s small business [accounting software reviews](https://blueprint.fool.com) to help you make your choice.

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