

Accounting 100

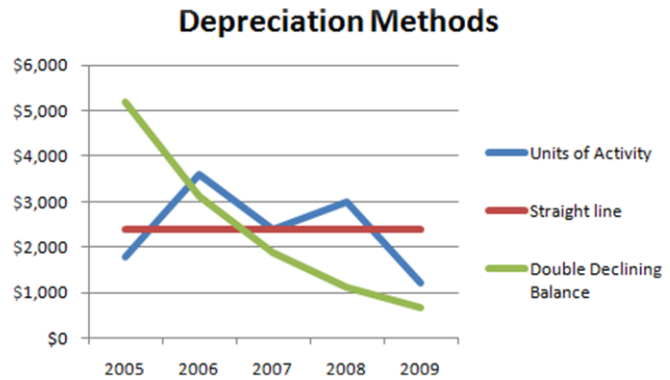
Depreciation

Depreciation- the process of allocating to expense the cost of a plant asset over its useful life.

There are three types of plant assets: land improvements, buildings, and equipment.

Depreciation Methods

1. Straight-line
2. Declining-balance
3. Units-of-activity



1. **Straight-line**- an equal amount of depreciation is expensed each year of the asset’s useful life.

Cost \$13000

Expected Salvage Value \$ 1000

Estimated Useful Life 5

Estimated Useful Life (in miles) 100,000

Cost - Salvage Value = Depreciable Cost

$\$13000 - \$1000 = \$12000$

Depreciable Cost / Useful life = Depreciation Expense

$\$12000 / 5 = \2400

Depreciation rate= $100\% / 5 \text{ years} = 20\%$

Accumulated Depreciation- Depreciation taken throughout the useful life of an asset is accumulated in this account

| Year | Computation | | | = | End of Year | | |
|----------|------------------|---------|-------------------|-------|---------------------|--------------------------|------------|
| | Depreciable Cost | X | Depreciation Rate | | Annual Depreciation | Accumulated Depreciation | Book Value |
| 2005 | \$12,000 | | 20% | | \$2,400 | \$2,400 | *\$10,600 |
| 2006 | \$12,000 | | 20% | | \$2,400 | \$4,800 | \$8,200 |
| 2007 | \$12,000 | | 20% | | \$2,400 | \$7,200 | \$5,800 |
| 2008 | \$12,000 | | 20% | | \$2,400 | \$9,600 | \$3,400 |
| 2009 | \$12,000 | | 20% | | \$2,400 | \$12,000 | \$1,000 |
| | | | | Total | \$12,000 | | |
| *\$13000 | - | \$2,400 | | | | | |

Book Value- the difference between the cost of any depreciable asset and its related accumulated depreciation

2. Declining Balance- computes periodic depreciation using a declining book value. It results in more depreciation in the early years of an asset's life than does the straight-line approach. The most common is the **double declining balance method** in which the depreciation rate is double the straight line method. Do not subtract salvage value.

Depreciation Rate = 2 X Straight- line Depreciation Rate

Depreciation Rate = 2 X 20% = 40%

Cost X Depreciable Rate = Annual Depreciation Expense

\$13000 X 40% = \$5200

| Year | Computation | | | = | Annual Depreciation | End of Year | |
|----------|------------------------------|---------|-------------------|---|---------------------|--------------------------|------------|
| | Book Value Beginning of Year | X | Depreciation Rate | | | Accumulated Depreciation | Book Value |
| 2005 | \$13,000 | | 40% | | \$5,200 | \$5,200 | *\$7800 |
| 2006 | \$7,800 | | 40% | | \$3,120 | \$8,320 | \$4,680 |
| 2007 | \$4,680 | | 40% | | \$1,872 | \$10,192 | \$2,808 |
| 2008 | \$2,808 | | 40% | | \$1,123 | \$11,315 | \$1,685 |
| 2009 | \$1,685 | | 40% | | **\$685 | \$11,315 | \$1,000 |
| *\$13000 | minus | \$5,200 | | | | | |

** Computation of \$674 (\$1685 X 40%) is adjusted to \$685 in order for book value to equal salvage value.

3. Units-of-Activity- useful life is expected in terms of the total units of production or the use expected from the asset. The units- of- activity method is ideally suited to equipment whose activity can be measured in units of output, miles driven, or hours in use.

Depreciable Cost / Total Units- of- Activity = Depreciation Cost per Unit

\$12000 / 100,000 miles = \$0.12

Depreciation Cost per Unit X Units- of- Activity during the Year = Depreciation Expense

\$0.12 X 15000 miles = \$ 1800

| Year | Computation | | | = | Annual Depreciation | End of Year | |
|----------|-------------------|---------|------------------------|---|---------------------|--------------------------|------------|
| | Units of Activity | X | Depreciation Cost/Unit | | | Accumulated Depreciation | Book Value |
| 2005 | 15000 | | \$ 0.12 | | \$1,800 | \$1,800 | *\$11200 |
| 2006 | 30000 | | \$ 0.12 | | \$3,600 | \$5,400 | \$7,600 |
| 2007 | 20000 | | \$ 0.12 | | \$2,400 | \$7,800 | \$7,200 |
| 2008 | 25000 | | \$ 0.12 | | \$3,000 | \$10,800 | \$4,200 |
| 2009 | 10000 | | \$ 0.12 | | \$1,200 | \$12,000 | \$1,000 |
| *\$13000 | minus | \$1,800 | | | | | |