

MTH 134 LECTURE NOTES FOR STRAIGHT-LINE DEPRECIATION L.U. 17-1

Definition: The asset cost is the amount the company paid for an asset.

Definition: The estimated useful life is the number of years (or time periods) that a company can use the asset.

Definition: The residual value is the expected cash value at the end of the asset's useful life.

The total cost of an asset can not be shown as an expense for one year if the company plans to use the asset for more than one year.

Definition: The process of estimating the expense of an asset over each year (or time period) is called depreciation.

We will use the straight-line method of calculating depreciation. With the straight-line method you simply take the change in the assets value over the life of the asset and divide by the life of the asset in years.

example: Ken Long and Associates buys a fax machine for their business at a cost of \$450. They expect to use the machine for 10 years and to be able to sell it at the end of the 10 years for \$50. What is the depreciation expense for each year?

solution:

$$\text{depreciation} = \frac{\text{asset cost} - \text{residual value}}{\text{estimated useful life}} = \frac{\$450 - \$50}{10} = \$40$$

Note: If the company buys the asset in the middle of the year they need to calculate a partial year's depreciation. If the asset is bought before the 15th of the month, the full month counts.

example: Suppose Ken Long bought the fax on June 10th, 1988. What was the depreciation in 1988.

solution: June through December is 7 months. $\$40 \left(\frac{7}{12} \right) = \23.33

The depreciation in 1988 was \$23.33 .

Try the following problems.

1. Adjax bought a machine for \$86,000 . Its estimated life is 10 years with a residual value of \$6,000 . What is the book value of the machine at the end of year 2?

2. If an auto costing \$20,000 has an estimated life of 5 years with a residual value of \$5,000, what would be its depreciation during the first year of it was bought on February 8? (Use the straight-line method.)

solution: 1. \$70,000 2. \$27,200