

## Depreciation and Partial Periods:

How should companies compute depreciation for partial periods?

- Companies determine the depreciation expense for the full year and then
- prorate this depreciation expense between the two periods involved.

This process should continue throughout the useful life of the asset.

**Example (6):** Maserati SpA purchased a new machine for its assembly process on August 1, 2019. The cost of this machine was €150,000. The company estimated that the machine would have a salvage value of €24,000 at the end of its service life. Its life is estimated at 5 years and its working hours are estimated at 21,000 hours. Year-end is December 31

**Instructions:** Compute the depreciation expense under the following methods.

- (a) Straight-line depreciation.      (c) Sum-of-the-years'-digits.  
 (b) Activity method                      (d) Double-declining balance

**Solution:**

(a) Straight-line depreciation

| Year | Depreciable Base | Years | Annual Expense | Partial Year | Current Year Expense | Accum. Deprec. |
|------|------------------|-------|----------------|--------------|----------------------|----------------|
| 2019 | € 126,000        | / 5   | = \$ 25,200    | x 5/12       | = € 10,500           | \$ 10,500      |
| 2020 | 126,000          | / 5   | = 25,200       |              | 25,200               | 35,700         |
| 2021 | 126,000          | / 5   | = 25,200       |              | 25,200               | 60,900         |
| 2022 | 126,000          | / 5   | = 25,200       |              | 25,200               | 86,100         |
| 2023 | 126,000          | / 5   | = 25,200       |              | 25,200               | 111,300        |
| 2024 | 126,000          | / 5   | = 25,200       | x 7/12       | = <u>14,700</u>      | 126,000        |
|      |                  |       |                |              | <u>€ 126,000</u>     |                |

**Journal entry:**

|      |                          |        |        |
|------|--------------------------|--------|--------|
| 2019 | Depreciation expense     | 10,500 |        |
|      | Accumulated depreciation |        | 10,500 |



€  
126,000

Journal entry:

|             |                                 |               |
|-------------|---------------------------------|---------------|
| <b>2019</b> | <b>Depreciation expense</b>     | <b>17,500</b> |
|             | <b>Accumulated depreciation</b> | <b>17,500</b> |

**OR**

| Year | Depreciable<br>Base | Years     | Annual<br>Expense | Partial<br>Year | Current<br>Year<br>Expense | Accum.<br>Deprec. |
|------|---------------------|-----------|-------------------|-----------------|----------------------------|-------------------|
| 2019 | € 126,000           | x 5/15    | = 42,000          | x 5/12          | € 17,500                   | € 17,500          |
| 2020 | 126,000             | x 4.58/15 | = 38,500          |                 | 38,500                     | 56,000            |
| 2021 | 126,000             | x 3.58/15 | = 30,100          |                 | 30,100                     | 86,100            |
| 2022 | 126,000             | x 2.58/15 | = 21,700          |                 | 21,700                     | 107,800           |
| 2023 | 126,000             | x 1.58/15 | = 13,300          |                 | 13,300                     | 121,100           |
| 2024 | 126,000             | x .58/15  | = 4,900           |                 | 4,900                      | 126,000           |
|      |                     |           |                   |                 | € 126,000                  |                   |

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**(d) Double-declining balance:**

| Year | Depreciable<br>Base | Rate<br>per<br>Year | Annual<br>Expense | Partial<br>Year | Current<br>Year<br>Expense |
|------|---------------------|---------------------|-------------------|-----------------|----------------------------|
| 2019 | € 150,000           | x 40%               | = € 60,000        | x 5/12          | = € 25,000                 |
| 2020 | 125,000             | x 40%               | = 50,000          |                 | 50,000                     |
| 2021 | 75,000              | x 40%               | = 30,000          |                 | 30,000                     |

|             |               |          |            |          |               |             |                         |
|-------------|---------------|----------|------------|----------|---------------|-------------|-------------------------|
| <b>2022</b> | <b>45,000</b> | <b>x</b> | <b>40%</b> | <b>=</b> | <b>18,000</b> |             | <b>18,000</b>           |
| <b>2023</b> | <b>27,000</b> | <b>x</b> | <b>40%</b> | <b>=</b> | <b>10,800</b> | <b>Plug</b> | <b>3,000</b>            |
|             |               |          |            |          |               |             | <u><u>€ 126,000</u></u> |

**Journal entry:**

|             |                                  |               |
|-------------|----------------------------------|---------------|
| <b>2019</b> | <b>Depreciation expense</b>      | <b>25,000</b> |
|             | <b>Accumultated depreciation</b> | <b>25,000</b> |

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