

The Double Declining Balance Method (DDBM) is an accelerated depreciation method that uses a fixed percentage rate (k) set to exactly twice the straight-line rate ($k = 2/L$). DDBM does not factor in the salvage value when calculating this annual percentage rate.

First, compute the constant depreciation rate k :

$$k = \frac{2}{L} = \frac{2}{8} = 0.25 \text{ (or 25\%)}$$

Using this rate, calculate the remaining book value at the end of the 3rd year (C_3):

$$C_3 = C_o \left(1 - \frac{2}{L}\right)^n = \text{P}50,000(1 - 0.25)^3$$

$$C_3 = \text{P}21,093.75$$