FA Module 10: Accounting for long-lived assets – homework assignment

(The attached PDF file has better formatting.)

*Homework assignment:*

A firm buys an asset (estimated useful life = 5 years) for 100 on December 31, 20X0, and uses either straight line depreciation or double declining balance depreciation. The corporate tax rate is 20% and the interest rate to compute present values is 6% *per annum*. The asset has no salvage value after 5 years. Assume that the selected depreciation schedule affects both financial accounting and tax accounting.

A. What is the difference in reported profits between the two depreciation methods in 20X2?
B. What is the difference in the present value of the firm between the two depreciation methods at December 31, 20X0? (Depreciation affects the tax cash flows. Compute the present value of the difference in the tax payments. Assume the tax payments for the year occur each December 31 for 20X1 through 20X5.)

[A faster depreciation schedule causes reported profits to shift from earlier years to later years, but also causes tax payments to shift from later years to earlier years.]