

Chapter I10

Depreciation, Cost Recovery, Depletion, and Amortization

Problems

I0-28 The purpose of this problem is to illustrate the tax advantage of properly allocating the Sec. 179 deduction among properties when the mid-quarter convention is applicable. In this case, depending on which property is selected for the Sec. 179 deduction, the mid-quarter convention may or may not apply. Two alternatives are demonstrated below:

Alternative #1: Allocate the entire Sec. 179 deduction to Equipment A. Since the entire \$20,000 is allocated to Equipment A, the mid-quarter convention will apply, as follows:

Property placed into service in 4th quarter	\$50,000
Total property placed into service during the year (50,000 + 30,000)	\$80,000
Percentage of equipment placed into service in 4th quarter (50,000/80,000)	62.5%

Since 40% or more equipment was placed into service in the last quarter of the year, the mid-quarter convention applies.

2000 Depreciation:

Equipment A: \$50,000 - 20,000 = 30,000 x 25% (Table 3, Appendix C)	\$ 7,500
Section 179	20,000
Equipment B: \$50,000 x 3.57% (Table 5, Appendix C)	<u>1,785</u>
TOTAL DEPRECIATION - 1999	<u>\$29,285</u>

Alternative #2: Allocate the entire Sec. 179 deduction to Equipment B. The mid-quarter convention will not apply, as follows:

Property placed into service in 4th quarter (less Sec. 179 deduction)	\$30,000
Total property placed into service during the year	\$80,000
Percentage of equipment placed into service in 4th quarter	37.5%

Since less than 40% of equipment was placed into service in the last quarter of the year, the mid-quarter convention does not apply.

2000 Depreciation:

Equipment A: \$50,000 x 20% (Table 1, Appendix C)	\$10,000
Equipment B: \$50,000 - 20,000 = 30,000 x 14.29% (Table 1, Appendix C)	4,287
Section 179	<u>20,000</u>
TOTAL DEPRECIATION - 1999	<u>\$34,287</u>

In this case, Todd would maximize his depreciation in 2000 if he selects Equipment B for the Sec. 179 deduction. It should be pointed out that taxpayers are not required to select the entire \$20,000 to one piece of equipment. A portion of the Sec. 179 deduction could be allocated to Equipment A and the remainder to Equipment B. In some cases, the allocation of the Sec. 179 deduction to property placed into service early in the year to force the mid-quarter convention will be favorable to the taxpayer. This is not the case in this problem. pp. I10-7 through I10-11.

10-29 a. All of the Long Corporation's assets are depreciated under the alternative depreciation system (ADS). Year 2000 depreciation for each asset is computed using Table 10, Appendix C.

Equipment - \$2,857 (\$40,000 x 0.0714).
 Light duty truck - \$3,000 (\$30,000 x 20% x 1/2 year). (1/2 depreciation in year of sale).
 Furniture - \$1,429 (\$10,000 x 0.1429).
 Automobile - \$1,200 (\$12,000 x 20% x 1/2 year).

p. I10-11.

b. Light truck	\$12,000
Minus: Basis	<u>(12,000)^a</u>
Gain	<u>\$ -0-</u>

^a \$30,000 - [\$3,000 in 1997 + \$12,000 (\$6,000 in 1998 and 1999), + \$3,000 in 2000]. One-half year is taken in the year of acquisition and one-half in the year of disposition.

Automobile	\$10,000
Minus: Basis (\$12,000 - 4,800)	<u>(7,200)^b</u>
Gain	<u>\$ 2,800</u>

^b \$12,000 - (\$1,200 in 1998, 2,400 in 1999 and \$1,200 in 2000). One-half year is taken in the year of acquisition and one-half year in the year of disposition.

pp. I10-6 through I10-11.

10-30 Both assets are "listed property" and are subjected to the special rules contained in Sec. 280F. The MACRS depreciation deduction for the automobile in 2000 is \$1,320. The depreciation for the personal computer in 2000 is \$160 under the alternative depreciation system. These amounts are computed as follows:

For the automobile:

If a property's business use is greater than 50% of its total usage, the taxpayer may use the regular MACRS rates for the business use portion of the asset's cost.

Cost of the automobile	\$11,000
Times: MACRS rate	<u>x 0.2000</u>
MACRS depreciation	\$ 2,200 ^a
Times: Business percentage use	<u>x .60</u>
MACRS depreciation	<u>\$ 1,320</u>

^a Luxury car limit is \$3,060 in 2000, so limit is \$1,836 (\$3,060 x 60%) and, therefore, does not apply in this situation.

For the computer:

If a property's business use is less than 50%, the taxpayer must use the alternative depreciation system which is five-year straight-line depreciation for automobiles and computers.

Cost of the computer	\$4,000
Times: Business percentage use	<u>x .40</u>
Business portion	\$1,600
Times: rate from Table 10, Appendix C	<u>x .10</u>
Depreciation	<u>\$ 160</u>

pp. I10-11 and I10-12.

I0-33 The depreciation for 2000, 2001, 2002 is \$3,060, \$4,900 and \$2,950, respectively. These amounts are computed as follows:

Year	MACRS Deduction	Ceiling Limit	Allowed Deduction
2000	\$4,000 (\$20,000 x 0.2000)	\$3,060	\$3,060
2001	\$6,400 (\$20,000 x 0.3200)	4,900	4,900
2002	\$3,840 (\$20,000 x 0.1920)	2,950	2,950

Note: For subsequent years there is a \$1,775 ceiling limitation until the automobile is fully depreciated. pp. I10-12 and I10-13.

10-35 a. The \$7,200 ($\600×12) rental payments \times 80% business use are deductible or \$5,760 is a business expense for each of the two years.

b. Troy must include \$155.20 in gross income ($\$194 \times .80 \times 365/365$) for 2000 and \$341.60 ($\$427 \times 80\% \times 365/365$) for 2001.

c. The \$5,760 rental payments are deductible but no amount is included in gross income because the FMV is below the minimum amount designated as a luxury auto. pp. I10-12 through I10-14.

10-37 The only expenditures that are deductible as research and experimental costs under Sec. 174 are materials and supplies for research laboratory, utilities and depreciation on research laboratory and equipment, and research costs subcontracted to a local university. Costs of acquiring another person's patent, market research survey's and labor and supplies for quality control tests do not qualify. pp. I10-16 and I10-17.

10-39 If the IDCs are expensed, the cost depletion amount is \$40,000, computed as follows:

Acquisition cost	\$200,000
Divided by:	
Estimated recoverable units	<u>20,000</u>
Amount per unit cost depletion	\$ 10
Times: Units sold	<u>\times 4,000</u>
Depletion amount	<u>\$ 40,000</u>

b. If the IDCs are capitalized, the cost depletion amount is \$44,000. The basis for cost depletion purposes is \$220,000.

Acquisition cost ($\$200,000 + \$20,000$)	\$220,000
Divided by:	
Estimated recoverable units	<u>20,000</u>
Amount per unit cost depletion	\$ 11
Times: Units sold	<u>\times 4,000</u>
Depletion amount	<u>\$ 44,000</u>

c. One must include in the tax return, the greater of cost depletion or percentage depletion not to exceed 100% of taxable income before depletion is included. Therefore, cost depletion of \$44,000 is deducted if the IDCs are capitalized and \$40,000 if the IDCs are expensed because percentage depletion is only \$25,000.

d. Assuming there is substantial gross income, the immediate expense method is preferable because \$20,000 intangible drilling costs may be expensed in the initial year while still deducting \$40,000 of cost depletion. Under the capitalization method, gross income may only be reduced by \$44,000. pp. I10-18 through I10-20.