

# Accounting for an operating lease assignment



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Accounting for an operating lease. Simple 15–20 E21-14 Operating lease for lessee and lessor. Simple 15–20 \*E21-15 Sale-leaseback. Moderate 20–30 \*E21-16 Lessee-lessor, sale-leaseback. Moderate 20–30 P21-1 Lessee-lessor entries-sales-type lease. Simple 20–25 P21-2 Lessee-lessor entries; operating lease. Simple 20–30 P21-3 Lessee-lessor entries; balance sheet presentation; sales-type lease. Moderate 35–45 P21-4 Balance sheet and income statement disclosure—lessee. Moderate 30–40 P21-5 Balance sheet and income statement disclosure—lessor. Moderate 30–40 P21-6 Lessee entries with residual value. Moderate 25–35

P21-7 Lessee entries and balance sheet presentation, capital lease. Moderate 25–30 P21-8 Lessee entries and balance sheet presentation, capital lease. Moderate 20–30 P21-9 Lessee entries, capital lease with monthly payments. Moderate 20–30 P21-10 Lessor computations and entries, sales-type lease with unguaranteed residual value. Complex 30–40 P21-11 Lessee computations and entries, capital lease with unguaranteed residual value. Complex 30–40 P21-12 Basic lessee accounting with difficult PV calculation. Moderate 40–50 P21-13 Lessor computations and entries; sales-type lease with guaranteed residual value.

Complex 30–40 P21-14 Lessee computations and entries; capital lease with guaranteed residual value. Complex 30–40 P21-15 Operating lease vs. capital lease. Moderate 30–40 P21-16 Lessee-lessor accounting for residual values. Complex 30–40 ASSIGNMENT CHARACTERISTICS TABLE (Continued)

Item	Description	Level of Difficulty	Time (minutes)
CA21-1	Lessee accounting and reporting.	Moderate	15–25
CA21-2	Lessor and lessee accounting and disclosure.	Moderate	25–35
CA21-3	Lessee capitalization criteria.	Moderate	

20–30 CA21-4 Comparison of different types of accounting by lessee and lessor. Moderate 15–25

CA21-5 Lessee capitalization of bargain-purchase option. Moderate 30–35

CA21-6 Lease capitalization, bargain-purchase option. Moderate 20–25

\*CA21-7 Sale-leaseback. Moderate 15–25 \*CA21-8 Sale-leaseback. Moderate

20–25 SOLUTIONS TO CODIFICATION EXERCISES CE21-1 Master Glossary (a)A

bargain-purchase option is a provision allowing the lessee, at his option, to purchase the leased property for a price that is sufficiently lower than the expected fair value of the property at the date the option becomes exercisable that exercise of the option appears, at lease inception, to be reasonably assured. b)The incremental borrowing rate is the rate that, at lease inception, the lessee would have incurred to borrow over a similar term the funds necessary to purchase the leased asset. This definition does not proscribe the lessee's use of a secured borrowing rate as its incremental borrowing rate if that rate is determinable, reasonable, and consistent with the financing that would have been used in the particular circumstances.

(c)Estimated residual value is the estimated fair value of the leased property at the end of the lease term. d)Unguaranteed residual value is the estimated residual value of the leased property exclusive of any portion guaranteed by the lessee or by a third party unrelated to the lessor. A guarantee by a third party related to the lessee shall be considered a lessee guarantee. If the guarantor is related to the lessor, the residual value shall be considered as unguaranteed. CE21-2 According to FASB ASC 840-10-25-5 (Leases—Recognition): For a lessee, minimum lease payments comprise the payments that the lessee is obligated to make or can be required to make in

connection with the leased property, excluding both of the following:

a)Contingent rentals (b)Any guarantee by the lessee of the lessor's debt and the lessee's obligation to pay (apart from the rental payments) executory costs such as insurance, maintenance, and taxes in connection with the leased property. CE21-3 According to FASB ASC 840-30-50-1 (Capital Leases—Disclosure): All of the following information with respect to capital leases shall be disclosed in the lessee's financial statements or the footnotes thereto: (a)The gross amount of assets recorded under capital leases as of the date of each balance sheet presented by major classes according to nature or function.

This information may be combined with the comparable information for owned assets. CE21-3 (Continued) (b)Future minimum lease payments as of the date of the latest balance sheet presented, in the aggregate and for each of the five succeeding fiscal years, with separate deductions from the total for the amount representing executory costs, including any profit thereon, included in the minimum lease payments and for the amount of the imputed interest necessary to reduce the net minimum lease payments to present value (see paragraphs 840-30-30-1 through 30-4). c)The total of minimum sublease rentals to be received in the future under noncancelable subleases as of the date of the latest balance sheet presented. (d)Total contingent rentals actually incurred for each period for which an income statement is presented. CE21-4 According to FASB ASC 840-30-30-6 (Capital Leases—Initial Measurement): The lessor shall measure the gross investment in either a sales-type lease or direct financing lease initially as the sum of the following amounts: a)The minimum lease payments net of amounts, if any,

included therein with respect to executory costs (such as maintenance, taxes, and insurance to be paid by the lessor) including any profit thereon.

(b)The unguaranteed residual value accruing to the benefit of the lessor. The estimated residual value used to compute this amount shall not exceed the amount estimated at lease inception except as provided in paragraph 840-

30-30-7. ANSWERS TO QUESTIONS \*\*1. The major lessor groups in the United States are banks, captives, and independents. Captives have the point of sale advantage in finding leasing customers; that is, as soon as a parent receives a possible order, a lease financing arrangement can be developed by its leasing subsidiary. Furthermore, the captive (lessor) has the product knowledge which gives it an advantage when financing the parents' product. The current trend is for captives to focus on the company's products rather than to do general lease financings. \*\*2. (a)Possible advantages of leasing:

1.

Leasing permits the write-off of the full cost of the assets (including any land and residual value), thus providing a possible tax advantage. 2. Leasing may be more flexible in that the lease agreement may contain less restrictive provisions than the bond indenture. 3. Leasing permits 100% financing of assets. 4. Leasing may permit more rapid changes in equipment, reduce the risk of obsolescence, and pass the risk in residual value to the lessor or a third party. 5. Leasing may have favorable tax advantages. 6. Potential of off-balance sheet financing with certain types of leases.

Assuming that funds are readily available through debt financing, there may not be great advantages (in addition to the above-mentioned) to signing a noncancelable, long-term lease. One of the usual advantages of leasing is its

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availability when other debt financing is unavailable. (b) Possible disadvantages of leasing: 1. In an ever-increasing inflationary economy, retaining title to assets may be desirable as a hedge against inflation. 2. Interest rates for leasing often are higher and a profit factor may be included in addition. 3.

In some cases, owning the asset provides unique tax advantages, such as when bonus depreciation is permitted. (c) Since a long-term noncancelable lease which is used as a financing device generally results in the capitalization of the leased assets and recognition of the lease commitment in the balance sheet, the comparative effect is not very different from purchase and ownership. Assets leased under such terms would be capitalized at the present value of the future lease payments; this value is probably somewhat equivalent to the purchase price of the assets.

Bonds sold at par would be nearly equivalent to the present value of the future lease payments; in neither case would interest be capitalized. The amounts presented in the balance sheet would be quite comparable as would the general classifications; the specific labels (leased assets and lease obligation) would be different. \*\*3. Lessees have available two lease accounting methods: (a) the operating method and (b) the capital-lease method. Under the operating method, the leased asset remains the property of the lessor with the payment of a lease rental recognized as rental expense.

Generally the lessor pays the insurance, taxes, and maintenance costs related to the leased asset. Under the capital-lease method, the lessee treats

the lease transaction as if an asset were being purchased on credit; therefore, the lessee: (1) sets up an asset and a related obligation and (2) recognizes depreciation of the asset, reduction of the obligation, and interest expense. Questions Chapter 21 (Continued) \*\*4. Ballard Company's rental of warehousing space on a short-term and sporadic basis is seldom construed as the acquisition of an asset or even a financing arrangement.

The contract consists mainly of services which are to be performed proportionately by the lessor and the lessee—the rent to be paid by the lessee is offset by the service to be performed by the lessor. While a case can be made for the existence of an acquisition of some property rights, be they ever so trifling, the accounting treatment would be to record only the periodic rental payments as they are made and to allocate rent expense to the periods in which the benefits are received.

No asset would be capitalized in this case, and an obligation for lease payments would be recorded only to the extent that services received from the lessor exceeded the rentals paid; that is, the rent payment is overdue. This lease should be reported as an operating lease. \*\*5. Minimum rental payments are the periodic payments made by the lessee and received by the lessor. These payments may include executory costs such as maintenance, taxes, and insurance. Minimum lease payments are payments required or expected to be made by the lessee.

They include minimum rental payments less executory costs, a bargain purchase option, a guaranteed residual value, and a penalty for failure to renew the lease. The present value of the minimum lease payments is

capitalized by the lessee. \*\*6. The distinction between a direct-financing lease and a sales-type lease is the presence or absence of a manufacturer's or dealer's profit. A sales-type lease involves a manufacturer's or dealer's profit, and a direct-financing lease does not. The profit is the difference between the fair value of the leased property at the inception of the lease and the lessor's cost or carrying value. \*7. Under the operating method, rent expense (and a compensating liability) accrues day by day to the lessee as the property is used. The lessee assigns rent to the periods benefiting from the use of the asset and ignores in the accounting any commitments to make future payments. Appropriate accruals are made if the accounting period ends between cash payment dates. \*\*8. Under the capital-lease method, the lessee treats the lease transactions as if the asset were being purchased on an installment basis: a financial transaction in which an asset is acquired and an obligation is created.

The asset and the obligation are stated in the lessee's balance sheet at the lower of: (1) the present value of the minimum lease payments (excluding executory costs) during the lease term or (2) the fair value of the leased asset at the inception of the lease. The present value of the lease payments is computed using the lessee's incremental borrowing rate unless the implicit rate used by the lessor is lower and the lessee has knowledge of it. The effective-interest method is used to allocate each lease payment between a reduction of the lease obligation and interest expense.

If the lease transfers ownership or contains a bargain purchase option, the asset is depreciated in a manner consistent with the lessee's normal depreciation policy on assets owned, using the economic life of the asset and



allowing for salvage value. If the lease does not transfer ownership or contain a bargain-purchase option, the leased asset is amortized over the lease term. \*\*9. From the standpoint of the lessor, leases may be classified for accounting purposes as: (a) operating leases, (b) direct-financing leases, and (c) sales-type leases.

From the standpoint of lessors, a capital lease meets one or more of the following four criteria: 1. The lease transfers ownership, 2. The lease contains a bargain purchase option, 3. The lease term is equal to 75% or more of the estimated economic life of the property, 4. The present value of the minimum lease payments (excluding executory costs) equals or exceeds 90% of the fair value of the property. And meet both of the following criteria: 1. Collectibility of the payments required from the lessee is reasonably predictable, and Questions Chapter 21 (Continued) 2.

No important uncertainties surround the amount of unreimbursable costs yet to be incurred by the lessor, Capital leases are classified as direct-financing leases or sales-type leases. All other leases are classified as operating leases. The distinction for the lessor between a direct-financing lease and a sales-type lease is the presence or absence of a manufacturer's or dealer's profit or loss. \*10. If the lease transaction satisfies the necessary criteria to be classified as a direct-financing lease, the lessor records a " lease receivable" for the leased asset. The lease receivable is the present value of the minimum lease payments.

Minimum lease payments include the rental payments (excluding executory costs), bargain purchase option (if any), guaranteed residual value (if any)

and penalty forfeiture to renew (if any). In addition, the present value of the unguaranteed residual value (if any) must also be included. \*11. Under the operating method, each rental receipt of the lessor is recorded as rental revenue on the use of an item carried as a fixed asset. The fixed asset is depreciated in the normal manner, with the depreciation expense of the period being matched against the rental revenue.

The amount of revenue recognized in each accounting period is equivalent to the amount of rent receivable according to the provisions of the lease. In addition to the depreciation charge, maintenance costs and the cost of any other services rendered under the provisions of the lease that pertain to the current accounting period are charged against the recognized revenue. \*12.

Walker Company can use the sales-type lease accounting method if at the inception of the lease a manufacturer's or dealer's profit (or loss) exists and the lease meets one or more of the following four criteria: 1)The lease transfers ownership of the property to the lessee, (2)The lease contains a bargain-purchase option, (3)The lease term is equal to 75% or more of the estimated economic life of the property leased, (4)The present value of the minimum lease payments (excluding executory costs) equals or exceeds 90% of the fair value of the leased property. Both of the following criteria must also be met: (1)Collectibility of the payments required from the lessee is reasonably predictable, and (2)No important uncertainties surround the amount of unreimbursable costs yet to be incurred by the lessor. 13.

Metheny Corporation should recognize the difference between the fair value (normal sales price) of the leased property at the inception of the lease and its cost or carrying amount (book value) as gross profit in the period the

sales-type lease begins and the assets are transferred to the lessee. The balance of the transaction is treated as a direct-financing lease (i. e. , interest revenue is earned over the lease term). \*14. The lease agreement between Alice Foyle, M. D. and Brownback Realty, Inc. appears to be in substance a purchase of property.

Because the lease has a bargain-purchase option which transfers ownership of the property to the lessee, the lease is a capital lease. Additional evidence of the capital lease character is that the lessor recovers all costs plus a reasonable rate of return on investment. As a capital lease, the property and the related obligation should be recorded at the discounted amount of the future lease payments with that amount being allocated between the land and the building in proportion to their fair values at the inception of the lease. The building should be depreciated over its estimated useful life. 15.

(a)(1)The lessee's accounting for a lease with an unguaranteed residual value is the same as the accounting for a lease with no residual value in terms of the computation of the minimum lease payments and the capitalized value of the leased asset and the lease obligation. That is, unguaranteed residual values are not included in the lessee's minimum lease payments. Questions Chapter 21 (Continued) (2)A guaranteed residual value affects the lessee's computation of the minimum lease payments and the capitalized amount of the leased asset and the lease obligation.

The capitalized value is affected initially by the presence of a guaranteed residual value since the present value of the lease obligation is now made up of two components—the periodic lease payments and the guaranteed residual value. The amortization of the lease obligation will result in a lease

obligation balance at the end of the lease period which is equal to the guaranteed residual value. Upon termination of the lease, the lessee may recognize a gain or loss depending on the relationship between the actual residual value and the amount guaranteed. b) (1) & (2) The amount to be recovered by the lessor is the same whether the residual value is guaranteed or unguaranteed. Therefore, the amount of the periodic lease payments as set by the lessor is the same whether the residual value is guaranteed or unguaranteed. \*16. If the estimate of the residual value declines, the lessor must recognize a loss to the extent of the decline in the period of the decline. Taken literally, the accounting for the entire transaction must be revised by the lessor using the changed estimate. The lease receivable is reduced by the amount of the decline in the estimated residual value.

Upward adjustments of the estimated residual value are not made. \*17. If a bargain-purchase option exists, the lessee must increase the present value of the minimum lease payments by the present value of the option price. A bargain purchase option also affects the depreciable life of the leased asset since the lessee must depreciate the asset over its economic life rather than the term of the lease. If the lessee fails to exercise the option, the lessee will recognize a loss to the extent of the net book value of the leased asset in the period that the option expired. 18. Initial direct costs are the incremental costs incurred by the lessor that are directly associated with negotiating, consummating and initially processing leasing transactions. For operating leases, the lessor should defer initial direct costs and allocate them over the lease term in proportion to the recognition of rental income. In a sales-type

lease transaction, the lessor expenses the initial direct costs in the year of incurrence (i. e. , the year in which profit on the sale is recognized).

In a direct-financing lease, initial direct costs should be added to the net investment in the lease and amortized over the life of the lease as a yield adjustment. \*19. Lessees and lessors should disclose the future minimum rental payments required as of the date of the latest balance sheet presented, in the aggregate, and for each of the five succeeding fiscal years. \*20. The term “ sale-leaseback” describes a transaction in which the owner of property sells such property to another and immediately leases it back from the new owner.

The property is sold generally at a price equal to or less than current fair value and leased back for a term approximating the property’s useful life for lease payments sufficient to repay the buyer for the cash invested plus a reasonable return on the buyer’s investment. The purpose of the transaction is to raise money with certain property given as security. For accounting purposes the sale-leaseback should be accounted for by the lessee as a capital lease if the criteria are satisfied and by the lessor as a purchase and a direct-financing lease if the criteria are satisfied.

Any income or loss experienced by the seller-lessee from the sale of the assets that are leased back should be deferred and amortized over the lease term (or the economic life if either criteria (1) a bargain purchase option or (2) a transfer of ownership occurs at the end of the lease is satisfied) in proportion to the amortization of the leased assets. Losses should be recognized immediately. Furthermore, minor leasebacks (present value of

rentals less than 10% of fair value) should be reported as a sale with related gain recognition. SOLUTIONS TO BRIEF EXERCISES BRIEF EXERCISE 21-1

The lease does not meet the transfer of ownership test, the bargain purchase test, or the economic life test [(5 years ? 8 years) ; 75%]. However, it does pass the recovery of investment test. The present value of the minimum lease payments ( $\$31,000 \times 4.16986 = \$129,266$ ) is greater than 90% of the FV of the asset ( $90\% \times \$138,000 = \$124,200$ ). Therefore, Callaway should classify the lease as a capital lease. BRIEF EXERCISE 21-2 Leased Equipment  $\$150,000$  Lease Liability  $\$150,000$  Lease Liability  $43,019$  Cash  $43,019$  BRIEF EXERCISE 21-3 Interest Expense  $29,530$  Interest Payable [ $(\$300,000 - \$53,920) \times 12\%$ ]  $29,530$

Depreciation Expense  $37,500$  Accumulated Depreciation—Capital Leases ( $\$300,000 \times 1/8$ )  $37,500$  BRIEF EXERCISE 21-4 Interest Payable [ $(\$300,000 - \$53,920) \times 12\%$ ]  $29,530$  Lease Liability  $24,390$  Cash  $53,920$  BRIEF EXERCISE 21-5 Rent Expense  $35,000$  Cash  $35,000$  BRIEF EXERCISE 21-6 Lease Receivable ( $4.99271 \times \$30,044$ )  $\$150,000$  Equipment  $\$150,000$  Cash  $\$30,044$  Lease Receivable  $\$30,044$  BRIEF EXERCISE 21-7 Interest Receivable  $9,596$  Interest Revenue [ $(\$150,000 - \$30,044) \times 8\%$ ]  $9,596$  BRIEF EXERCISE 21-8 Cash  $\$15,000$  Rent Revenue  $\$15,000$  Depreciation Expense  $\$10,000$  Accumulated Depreciation—Capital Leases  $\$80,000 \times 1/8$ )  $\$10,000$  BRIEF EXERCISE 21-9 Leased Equipment  $\$202,921^*$  Lease Liability  $\$202,921$  \*PV of rentals  $\$40,000 \times 4.79079$   $\$191,632$  [PV of guar. RV  $\$20,000 \times .56447$   $\$11,289$   $\$202,921$  Lease Liability  $\$40,000$  Cash  $\$40,000$  BRIEF EXERCISE 21-10 Lease Receivable  $\$202,921$  Equipment  $\$202,921$  Cash  $\$40,000$  Lease Receivable  $\$40,000$  BRIEF EXERCISE 21-11 Lease

Receivable (\$40,800 X 4.03735) 164,724 Sales Revenue 164,724 Cost of Goods Sold 110,000 Inventory 110,000 Cash 40,800 Lease Receivable 40,800 \*BRIEF EXERCISE 21-12 Cash 33,000 Trucks 28,000 Unearned Profit on Sale—Leaseback 5,000 Leased Equipment 33,000\*

Lease Liability 33,000 \*(\$8,705 X 3.79079; \$1 difference due to rounding. )

Depreciation Expense 6,600 Accumulated Depreciation—Capital Leases

(\$33,000 X 1/5) 6,600 Unearned Profit on Sale—Leaseback 1,000

Depreciation Expense (\$5,000 X 1/5) 1,000 Interest Expense (\$33,000 X

10%) 3,300 Lease Liability 5,405 Cash 8,705 SOLUTIONS TO EXERCISES

EXERCISE 21-1 (15–20 minutes) (a) This is a capital lease to Adams since the lease term (5 years) is greater than 75% of the economic life (6 years) of the leased asset. The lease term is  $83\frac{1}{3}\%$  ( $5 \div 6$ ) of the asset's economic life.

b) Computation of present value of minimum lease payments:  $\$9,968 \times 4.$

$16986^* = \$41,565$  \*Present value of an annuity due of 1 for 5 periods at

10%. (c) 1/1/12 Leased Equipment 41,565 Lease Liability 41,565 Lease

Liability 9,968 Cash 9,968 12/31/12 Depreciation Expense 8,313

Accumulated Depreciation—Capital Leases 8,313 ( $\$41,565 \div 5 = \$8,313$ )

Interest Expense 3,160 Interest Payable 3,160 [ $(\$41,565 - \$9,968) \times .10$ ]

1/1/13 Lease Liability 6,808 Interest Payable 3,160 Cash 9,968 EXERCISE

21-2 (20–25 minutes) (a) To Brecker, the lessee, this lease is a capital lease because the terms satisfy the following criteria: 1.

The lease term is greater than 75% of the economic life of the leased asset; that is, the lease term is  $83\frac{1}{3}\%$  ( $50/60$ ) of the economic life. 2. The present value of the minimum lease payments is greater than 90% of the fair value of the leased asset; that is, the present value of \$10,515 (see below) is 96%

of the fair value of the leased asset: (b) The minimum lease payments in the case of a guaranteed residual value by the lessee include the guaranteed residual value. The present value therefore is: Monthly payment of \$250 for 50 months \$ 9, 800 Residual value of \$1, 180 715 Present value of minimum lease payments \$10, 515 c) Leased Equipment 10, 515 Lease Liability 10, 515 (d) Depreciation Expense 186. 70 Accumulated Depreciation—Capital Leases 186. 70  $[(\$10, 515 - \$1, 180) \div 50 \text{ months} = \$186. 70]$  (e) Lease Liability 144. 85 Interest Expense  $(1\% \times \$10, 515)$  105. 15 Cash 250. 00

EXERCISE 21-3 (20–30 minutes) Capitalized amount of the lease: Yearly payment \$90, 000 Executory costs (3, 088) Minimum annual lease payment \$86, 912 EXERCISE 21-3 (Continued) Present value of minimum lease payments  $\$86, 911. 86 \times 6. 32825 = \$550, 000. 00$  1/1/13 Leased Buildings 550, 000 Lease Liability 550, 000 1/1/13 Executory Costs 3, 088 Lease Liability 86, 912 Cash 90, 000 2/31/13 Depreciation Expense 55, 000 Accumulated Depreciation— Capital Leases 55, 000  $(\$550, 000 \div 10)$  12/31/13 Interest Expense (See Schedule 1) 55, 571 Interest Payable 55, 571 1/1/14 Executory Costs 3, 088 Interest Payable 55, 571 Lease Liability 31, 341 Cash 90, 000 12/31/14 Depreciation Expense 55, 000 Accumulated Depreciation— Capital Leases 55, 000 12/31/14 Interest Expense 51, 810 Interest Payable 51, 810 EXERCISE 21-3 (Continued) Schedule 1 KIMBERLY-CLARK CORP. Lease Amortization Schedule (Lessee)

Date	Annual Payment	Less Executory Costs	Interest (12%) on Liability	Reduction of Lease Liability	Lease Liability
1/1/12	\$550, 000				\$550, 000
1/1/12	\$86, 912	\$0	\$86, 912	\$0	\$463, 088
1/1/13	\$86, 912	\$55, 571	\$31, 341	\$431, 747	\$31, 341
1/1/14	\$86, 912	\$51, 810	\$35, 102	\$396, 645	\$0

645 EXERCISE 21-4 (20–25 minutes) Computation of annual payments Cost



(fair value) of leased asset to lessor \$240,000.00 Less: Present value of salvage value (residual value in this case) \$16,000 X .82645 (Present value of 1 at 10% for 2 periods) 13,223.20 Amount to be recovered through lease payments \$226,776.80 Two periodic lease payments \$226,776.80 ? 1.73554 \* \$130,666.42 \* Present value of an ordinary annuity of 1 for 2 periods at 10% KRAUSS LEASING COMPANY (Lessor)

Lease Amortization Schedule

Date	Annual Payment	Less Executory Costs	Interest on Lease Receivable	Recovery of Lease Receivable	Lease Receivable
1/1/13	\$240,000.00				
12/31/13	\$130,666.42	*\$24,000.00	\$106,666.42		
12/31/14	130,666.42	*13,332.84	117,333.58	16,000.00	

\*\$37,332.84 \*Difference of \$.52 due to rounding. EXERCISE 21-4

(Continued) (a) 1/1/13 Lease Receivable 240,000.00 Equipment 240,000.00  
 12/31/13 Cash (\$130,666.42 + \$7,000) 137,666.42 Executory Costs Payable 7,000.00 Lease Receivable 106,666.42 Interest Revenue 24,000.00  
 12/31/14 Cash 137,666.42

Executory Costs Payable 7,000.00 Lease Receivable 117,333.58 Interest Revenue 13,332.84 (b) 12/31/14 Cash 16,000.00 Lease Receivable 16,000.00 EXERCISE 21-5 (15–20 minutes) (a) Because the lease term is longer than 75% of the economic life of the asset and the present value of the minimum lease payments is more than 90% of the fair value of the asset, it is a capital lease to the lessee. Assuming collectibility of the rents is reasonably assured and no important uncertainties surround the amount of unreimbursable costs yet to be incurred by the lessor, the lease is a direct financing lease to the lessor.

The lessee should adopt the capital lease method and record the leased asset and lease liability at the present value of the minimum lease payments using the lessee's incremental borrowing rate or the interest rate implicit in the lease if it is lower than the incremental rate and is known to the lessee. The lessee's depreciation depends on whether ownership transfers to the lessee or if there is a bargain purchase option. If one of these conditions is fulfilled, amortization would be over the economic life of the asset. Otherwise, it would be depreciated over the lease term.

Because both the economic life of the asset and the lease term are three years, the leased asset should be depreciated over this period. EXERCISE 21-5 (Continued) The lessor should adopt the direct-financing lease method and replace the asset cost of \$75,000 with Lease Receivable of \$75,000. (See schedule below. ) Interest would be recognized annually at a constant rate relative to the unrecovered net investment. Cost (fair value of leased asset) \$75,000 Amount to be recovered by lessor through lease payments \$75,000 Three annual lease payments:  $\$75,000 \div 2.53130 = \$29,629$  Present value of an ordinary annuity of 1 for 3 periods at 9%. (b) Schedule of Interest and Amortization

	Rent Receipt/ Payment	Interest Revenue/ Expense	Reduction of Principal Receivable/ Liability
1/1/13	—	—	\$75,000
12/31/13	\$29,629	*\$6,750	\$22,879
12/31/14	29,629	4,691	24,938
12/31/15	29,629	2,446	27,183
	87,921	13,686	74,235

\*\$75,000 X .09 = \$6,750 EXERCISE 21-6 (15-20 minutes) (a)  $\$38,514 \times 5.7122 = \$220,000$  \*Present value of an annuity due of 1 for 8 periods at 11%. (b) 1/1/13 Lease Receivable 220,000 Cost of Goods Sold 170,000 Sales Revenue 220,000 Inventory 170,000 1/1/13 Cash 38,514 Lease Receivable 38,514

EXERCISE 21-6 (Continued) 12/31/13 Interest Receivable 19, 963 Interest Revenue  $[(\$220,000 - \$38,514) \times .11]$  19, 963 EXERCISE 21-7 (20–25 minutes) (a) This is a capital lease to Woods since the lease term is 75% (6 ? 8) of the asset's economic life. In addition, the present value of the minimum lease payments is more than 90% of the fair value of the asset. This is a capital lease to Palmer since collectibility of the lease payments is reasonably predictable, there are no important uncertainties surrounding the costs yet to be incurred by the lessor, and the lease term is 75% of the asset's economic life.

Because the fair value of the equipment (\$200, 000) exceeds the lessor's cost (\$150, 000), the lease is a sales-type lease. (b) Computation of annual rental payment: = \$41, 452 \*\*Present value of \$1 at 11% for 6 periods. \*\*Present value of an annuity due at 11% for 6 periods. (c) 1/1/12 Leased Equipment 190, 877 Lease Liability  $(\$41,452 \times 4.60478)$  \*\*\* 190, 877 Lease Liability 41, 452 Cash 41, 452 \*\*\*Present value of an annuity due at 12% for 6 periods. 12/31/12 Depreciation Expense 31, 813 Accumulated Depreciation — Capital Leases  $(\$190,877 \div 6 \text{ years})$  31, 813 Interest Expense 17, 931 Interest Payable  $(\$190,877 - \$41,452) \times .12$  17, 931

EXERCISE 21-7 (Continued) (d) 1/1/12 Lease Receivable 200, 000 \* Cost of Goods Sold 144, 654 \*\* Sales Revenue 194, 654 \*\*\* Inventory 150, 000  $[(\$41,452 \times 4.6959) + (\$10,000 \times .53464)]$  \*\*  $\$150,000 - (\$10,000 \times .53464)$  \*\*\*  $\$41,452 \times 4.6959$  Cash 41, 452 Lease Receivable 41, 452 12/31/12 Interest Receivable 17, 440 Interest Revenue  $[(\$200,000 - \$41,452) \times .11]$  17, 440 EXERCISE 21-8 (20–30 minutes) (a) The lease agreement has a bargain-purchase option and thus meets the criteria to be classified as

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a capital lease from the viewpoint of the lessee. Also, the present value of the minimum lease payments exceeds 90% of the fair value of the assets.

b) The lease agreement has a bargain-purchase option. The collectibility of the lease payments is reasonably predictable, and there are no important uncertainties surrounding the costs yet to be incurred by the lessor. The lease, therefore, qualifies as a capital-type lease from the view-point of the lessor. Due to the fact that the initial amount of lease receivable (net investment) (which in this case equals the present value of the minimum lease payments, \$81, 000) exceeds the lessor's cost (\$65, 000), the lease is

a sales-type lease. (c) Computation of lease liability: \$18, 829. 49 Annual rental payment X 4. 6986 PV of annuity due of 1 for  $n = 5$ ,  $i = 10\%$  \$78, 516.

34 PV of periodic rental payments EXERCISE 21-8 (Continued) \$ 4, 000.

00 Bargain-purchase option X. 62092 PV of 1 for  $n = 5$ ,  $i = 10\%$  \$ 2, 483. 68 PV of bargain purchase option \$78, 516. 34 PV of periodic rental payments + 2, 483. 68 PV of bargain-purchase option \$81, 000. 00 \*Lease liability \*rounded

GILL COMPANY (Lessee) Lease Amortization Schedule Date Annual Lease

Payment Plus BPO Interest (10%) on Liability Reduction of Lease Liability

Lease Liability 5/1/12 \$81, 000. 00 5/1/12 \$18, 829. 49 \$18, 829. 49 62, 170.

51 5/1/13 18, 829. 49 \*\$ 6, 217. 05 12, 612. 44 49, 558. 07 /1/14 18, 829. 49

4, 955. 81 13, 873. 68 35, 684. 39 5/1/15 18, 829. 49 3, 568. 44 15, 261. 05

20, 423. 34 5/1/16 18, 829. 49 2, 042. 33 16, 787. 16 3, 636. 18 4/30/17 4,

000. 00 \* 363. 82 \* 3, 636. 18 0 \$98, 147. 45 \$17, 147. 45 \$81, 000. 00

\*Rounding error is 20 cents. (d) 5/1/12 Leased Equipment 81, 000. 00 Lease

Liability 81, 000. 00 Lease Liability 18, 829. 49 Cash 18, 829. 49

12/31/12 Interest Expense 4, 144. 70 Interest Payable (\$6, 217. 05 X 8/12 =

\$4, 144. 70) 4, 144. 70 EXERCISE 21-8 (Continued) Depreciation Expense 5,

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400 Accumulated Depreciation— Capital Leases 5, 400 ( $\$81,000.00 \div 10 =$   
 $(\$8,100.00; \$8,100.00 \times (8/12 = \$5,400) / 1/13$  Interest Payable 4, 144. 70

Interest Expense 4, 144. 70 5/1/13 Interest Expense 6, 217. 05 Lease

Liability 12, 612. 44 Cash 18, 829. 49 12/31/13 Interest Expense 3, 303. 87

Interest Payable 3, 303. 87 ( $\$4,955.81 \times 8/12 = (\$3,303.87)$

12/31/13 Depreciation Expense 8, 100. 00 Accumulated Depreciation—

Capital Leases 8, 100. 00 ( $\$81,000.00 \div 10 \text{ years} = (\$8,100.00)$  (Note to  
 instructor: Because a bargain-purchase option was involved, the leased asset  
 is depreciated over its economic life rather than over the lease term. )

EXERCISE 21-9 (20–30 minutes) Note: The lease agreement has a bargain-  
 purchase option.

The collectibility of the lease payments is reasonably predictable, and there  
 are no important uncertainties surrounding the costs yet to be incurred by  
 the lessor. The lease, therefore, qualifies as a capital lease from the  
 viewpoint of the lessor. Due to the fact that the amount of the sale (which in  
 this case equals the present value of the minimum lease payments, \$81,  
 000) exceeds the lessor's cost (\$65, 000), the lease is a sales-type lease.

EXERCISE 21-9 (Continued) The minimum lease payments associated with  
 this lease are the periodic annual rents plus the bargain-purchase option.

There is no residual value relevant to the lessor's accounting in this lease.

(a) The lease receivable is computed as follows: \$18, 829. 49 Annual rental  
 payment  $\times 4.16986$  PV of annuity due of 1 for  $n = 5, i = 10\%$  \$78, 516. 34 PV  
 of periodic rental payments \$ 4, 000. 00 Bargain purchase option  $\times .62092$  PV  
 of 1 for  $n = 5, i = 10\%$  \$ 2, 483. 68 PV of bargain-purchase option \$78, 516.  
 34 PV of periodic rental payments + 2, 483. 68 PV of bargain-purchase option

\$81, 000. 00\*Lease receivable at inception \*Rounded (b)LENNOX LEASING COMPANY (Lessor) Lease Amortization Schedule Date Annual Lease Payment Plus BPO

Interest (10%) on Lease Receivable Recovery of Lease Receivable Lease  
 Receivable 5/1/12 \$81, 000. 00 5/1/12 \$18, 829. 49 \$18, 829. 49 62, 170. 51  
 5/1/13 18, 829. 49 \$ 6, 217. 05 12, 612. 44 49, 558. 07 5/1/14 18, 829. 49 4,  
 955. 81 13, 873. 68 35, 684. 39 5/1/15 18, 829. 49 3, 568. 44 15, 261. 05 20,  
 423. 34 5/1/16 18, 829. 49 2, 042. 33 16, 787. 16 3, 636. 18 4/30/17 4, 000.  
 00 363. 82\* 3, 636. 18 0 \$98, 147. 45 \*\$17, 147. 45 \$81, 000. 00 \*Rounding  
 error is 20 cents. EXERCISE 21-9 (Continued) (c)5/1/12Lease Receivable81,  
 000. 00 Cost of Goods Sold 65, 000. 00 Sales Revenue81, 000. 00  
 Inventory65, 000. 00 Cash 18, 829. 9 Lease Receivable18, 829. 49  
 12/31/12Interest Receivable 4, 144. 70 Interest Revenue 4, 144. 70 (\$6, 217.  
 05 X 8/12 = \$4, 144. 70) 5/1/13Cash 18, 829. 49 Lease Receivable12, 612.  
 44 Interest Receivable 4, 144. 70 Interest Revenue2, 072. 35 (\$6, 217. 05 –  
 \$4, 144. 70) 12/31/13Interest Receivable 3, 303. 87 Interest Revenue 3, 303.  
 87 (\$4, 955. 81 X 8/12 = (\$3, 303. 87) 5/1/14Cash18, 829. 49 Lease  
 Receivable13, 873. 68 Interest Receivable3, 303. 87 Interest Revenue 1,  
 651. 94 (\$4, 955. 81 – \$3, 303. 87) 12/31/14Interest Receivable 2, 378. 96  
 Interest Revenue 2, 378. 96 (\$3, 568. 44 X 8/12 = (\$2, 378. 96)

EXERCISE 21-10 (15–25 minutes) (a)Fair value of leased asset to lessor\$343,  
 000 Less: Present value of unguaranteed residual value \$61, 071 X . 56447  
 (present value of 1 at 10% for 6 periods) 34, 473 Amount to be recovered  
 through lease payments\$308, 527 Six periodic lease payments \$308, 527.  
 25 ? 4. 79079\*\$ 64, 400\*\* \*Present value of annuity due of 1 for 6 periods at

10%. \*\*Rounded to the nearest dollar. (b) FIEVAL LEASING COMPANY (Lessor)

Lease Amortization Schedule

Date	Annual Lease Payment	Plus URV Interest (10%) on Lease Receivable	Recovery of Lease Receivable	Lease Receivable
1/1/12	343,000	1/1/12 \$ 64,400	\$ 64,400	278,600
1/1/13	64,400	\$ 27,860	36,540	242,060
1/1/14	64,400	24,206	40,194	201,866
1/1/15	64,400	20,187	44,213	157,653
1/1/16	64,400	15,765	48,635	109,018
1/1/17	64,400	10,902	53,498	55,520
12/31/17	61,071	5,551	55,520	0
	\$447,471	\$104,471	\$343,000	

(c) 1/1/12 Lease Receivable 343,000  
 Equipment 343,000 1/1/12 Cash 64,400 Lease Receivable 64,400  
 12/31/12 Interest Receivable 27,860 Interest Revenue 27,860 1/1/13 Cash  
 64,400 Lease Receivable 36,540 Interest Receivable 27,860  
 12/31/13 Interest Receivable 24,206 Interest Revenue 24,206

EXERCISE 21-11 (20–30 minutes)

Note: This lease is a capital lease to the lessee because the lease term (five years) exceeds 75% of the remaining economic life of the asset (five years). Also, the present value of the minimum lease payments exceeds 90% of the fair value of the asset. \$20,541. 11 Annual rental payment X 4. 16986 PV of an annuity due of 1 for  $n = 5$ ,  $i = 10\%$  \$85,653. 55 PV of minimum lease payments (a) AZURE COMPANY (Lessee) Lease Amortization Schedule

Date	Annual Lease Payment	Interest (10%) on Liability	Reduction of Lease Liability	Lease Liability
1/1/12	\$85,653.55	1/1/12 \$ 20,541.11	\$20,541.11	65,112.44
1/1/13	20,541.11	*\$ 6,511.24	14,029.87	51,082.57
1/1/14	20,541.11	5,108.26	15,432.85	35,649.72
1/1/15	20,541.11	3,564.97	16,976.14	18,673.58
1/1/16	20,541.11	* 1,867.53	* 18,673.58	0
	\$102,705.55	*\$17,052.00	\$85,653.55	

\*Rounding error is 17 cents. (b) 1/1/12 Leased

Equipment 85,653.55 Lease Liability 85,653.55 1/1/12 Lease Liability 20,541.11 Cash 20,541.11 During 2012 Insurance Expense 900.00 Cash 900.00 Property Tax Expense 1,600.00 Cash 1,600.00 EXERCISE 21-11  
(Continued) 12/31/12 Interest Expense 6,511.24 Interest Payable 6,511.24 Depreciation Expense 17,130.71 Accumulated Depreciation—

Capital Leases 17,130.71 ( $\$85,653.55 \div 5 = \$17,130.71$ ) 1/1/13 Interest Payable 6,511.24 Interest Expense 6,511.24 Interest Expense 6,511.24 Lease Liability 14,029.87 Cash 20,541.11 During 2013 Insurance Expense 900.00 Cash 900.00 Property Tax Expense 1,600.00 Cash 1,600.00 12/31/13 Interest Expense 5,108.26 Interest Payable 5,108.26 Depreciation Expense 17,130.71 Accumulated Depreciation— Capital Leases 17,130.71

Note to instructor: 1. The lessor sets the annual rental payment as follows:  
Fair value of leased asset to lessor \$90,000.00 Less: Present value of unguaranteed residual value  $\$7,000 \times .62092$  (present value of 1 at 10% for 5 periods) 4,346.44 Amount to be recovered through lease payments \$85,653.56 Five periodic lease payments  $\$85,653.56 \div 4.16986 = \$20,541.11$   
\*Present value of annuity due of 1 for 5 periods at 10%. EXERCISE 21-11

(Continued) 2. The unguaranteed residual value is not subtracted when depreciating the leased asset. EXERCISE 21-12 (10–20 minutes) (a) Entries for Secada are as follows: 1/1/12 Buildings 3,600,000 Cash 3,600,000 12/31/12 Cash 220,000 Rent Revenue 220,000 Depreciation Expense 72,000 Accumulated Depreciation—

Buildings ( $\$3,600,000 \div 5$ ) 72,000 Property Tax Expense 85,000 Insurance Expense 10,000 Cash 95,000 (b) Entries for Ryker are as follows: 12/31/12 Rent Expense 220,000 Cash 220,000 (c) The real estate broker's



fee should be capitalized and amortized equally over the 10-year period. As a result, real estate fee expense of \$3, 000 ( $\$30, 000 \div 10$ ) should be reported in each period.

EXERCISE 21-13 (15–20 minutes) (a) Annual rental revenue \$180, 000 Less: Maintenance and other executory costs 25, 000 Depreciation ( $\$900, 000 \div 8$ ) 112, 500 Income before income tax \$ 42, 500

EXERCISE 21-13 (Continued) (b) Rent expense \$180, 000 Note: Both the rent security deposit and the last month's rent prepayment should be reported as a noncurrent asset.

EXERCISE 21-14 (15–20 minutes) (a) SAGE COMPANY  
Rent Expense For the Year Ended December 31, 2012  
Monthly rental \$15, 600 Lease period in 2013 (March–December) X 10 months \$156, 000

(b) HOOKE INC. Income or Loss from Lease before Taxes For the Year Ended December 31, 2012  
Rental revenue ( $\$15, 600 \times 10$  months) \$156, 000 Less expense Depreciation \$100, 000\*\* Commission 6, 250\*\* 106, 250 Income from lease before taxes \$ 49, 750 \*\* $\$1, 200, 000 \text{ cost} \div 10 \text{ years} = \$120, 000/\text{year}$   $120, 000 \times 10/12 = \$100, 000$  \*\* (Note to instructor: Under principles of accrual accounting, the commission should be amortized over the life of the lease:  $\$30, 000 \div 4 \text{ years} = \$7, 500$   $\times 10/12 = \$6, 250$ .)

\*EXERCISE 21-15 (20–30 minutes) Elmer's Restaurants (Lessee)\*

1/1/12 Cash 510, 000. 00 Equipment 450, 000. 00 Unearned Profit on Sale—  
Leaseback 60, 000. 00 Leased Equipment 510, 000. 00 Lease Liability (\$83, 000. 11 X 6. 14457) 510, 000. 00 Throughout 2013 Executory Costs 9, 000.

00 Accounts Payable 9, 000. 00 12/31/12 Unearned Profit on Sale—

Leaseback 6, 000. 00 Depreciation Expense\*\* ( $\$60, 000 \div 10$ ) 6, 000. 00

2/31/12 Depreciation Expense 51, 000. 00 Accumulated Depreciation—

Capital Leases ( $\$510, 000 \div 10$ ) 51, 000. 00 Interest Expense 51, 000. 00

Lease Liability 32, 000. 11 Cash 83, 000. 11 \*\*The lease should be treated as

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a capital lease because the present value of minimum lease payments equals the fair value of the computer. Also, the lease term is greater than 75% of the economic life of the asset, and title transfers at the end of the lease. \*\*The credit could also be to a revenue account. Note to instructor: 1. The present value of an ordinary annuity at 10% for 10 periods should be used to capitalize the asset.

In this case, Elmer's Restaurants would use the implicit rate of the lessor because it is lower than its own incremental borrowing rate and known to Elmer's Restaurants. \*EXERCISE 21-15 (Continued) 2. The unearned profit on the sale-leaseback should be amortized on the same basis that the asset is being depreciated. Partial Lease Amortization Schedule

Date	Annual Lease Payment	Interest (10%)	Amortization	Balance
1/1/12	\$510,000.00	0.00	0.00	\$510,000.00
12/31/12	\$83,000.11	\$51,000.00	\$32,000.11	477,999.89

Liquidity Finance Co. (Lessor)\* 1/1/12 Equipment 510,000.00 Cash 510,000.00 Lease Receivable 510,000.00 Equipment 510,000.00 12/31/12 Cash 83,000.11 Lease Receivable 32,000.11 Interest Revenue 51,000.00 \*Lease should be treated as a direct-financing lease because the present value of the minimum lease payments equals the fair value of the computer, and (1) collectibility of the payments is reasonably assured, (2) no important uncertainties surround the costs yet to be incurred by the lessor, and (3) the cost to the lessor equals the fair value of the asset at the inception of the lease. \*EXERCISE 21-16 (20–30 minutes) (a) Sale-leaseback arrangements are treated as though two transactions were a single financing transaction if the lease qualifies as a capital lease.

Any gain or loss on the sale is deferred and amortized over the lease term (if possession reverts to the lessor) or the economic life (if ownership transfers to the lessee). In this case, the lease qualifies as a capital lease because the lease term (10 years) is 83% of the remaining economic life of the leased property (12 years). Therefore, at 12/31/12, all of the gain of \$160, 000 (\$560, 000 – \$400, 000) would be deferred and amortized over 10 years. Since the sale took place on 12/31/12, there is no amortization for 2012.

\*EXERCISE 21-16 (Continued) b) A sale-leaseback is usually treated as a single financing transaction in which any profit on the sale is deferred and amortized by the seller. However, when either (1) only a minor part of the remaining use of the property is retained, or (2) more than a minor part but less than substantially all of the remaining use of property is retained, profit is not defined. The first situation occurs when the present value of the lease payments is 10% or less of the fair value of the sale-leaseback property. The second situation occurs when the lease-back is more than minor but does not meet the criteria of a capital lease for all the property sold. The second situation was not discussed in the textbook. ) This problem is an example of the first situation because the present value of the lease payments (\$35, 000) is less than 10% of the fair value of the asset (\$480, 000). Under these circumstances the sale and the leaseback are accounted for as separate transactions. Therefore, the full gain (\$480, 000 – \$420, 000, or \$60, 000) is recognized. (c) The profit on the sale of \$99, 000 should be deferred and amortized over the lease term. Since the leased asset is being depreciated using the sum-of-the-years' depreciation method, the deferred gain should also be