Overview

For accounting purposes, there are two general categories of leases: (1) operating leases and (2) capital leases. There are subcategories within the category of capital leases that you also need to be aware of.

The accounting treatment for operating leases is rather simple, and you have probably already encountered it. The lessor records lease or rent revenue and the lessee records lease or rent expense.

Without the rules for capital leases, a lessee could potentially lease all of their operational assets—greatly reducing their liabilities—even if they lease the operational assets for the assets’ entire, or nearly complete, useful lives. To reduce a company’s ability to paint a different picture in their financial statements than the substance of the transactions that are generating them, certain leases must be treated as assets and liabilities to the lessee even though the assets are technically owned by the non-user of them (the lessor).

Four criteria have been established to determine if a lease is a capital lease or not. If one or more of them are met, the lease must be treated as a capital lease to both the lessee and lessor. There are various kinds of capital leases. Three popular versions include financing leases, sales-type leases, and sale-leasebacks.

There are many required disclosures for leases. One reason for this is a company can purposely fail to meet the four criteria on its leases, but still lease their operational assets for a majority of the assets' useful lives in order to keep debt off the face of their balance sheet. Through a careful analysis of a company’s disclosure notes, creditors can “see through” the long-term operating leases and perhaps decide that a company is carrying too much off-balance-sheet debt to loan them new or additional funds.

The subject of the accounting treatment of leases has been a hot topic and will likely continue to be so. There could be further changes to the rules so that more leases are treated as capital leases. In any event, it is important to understand the hows and whys of lease accounting in order to become a better analyst of these sometimes difficult-to-understand transactions and the ultimate effects the differing treatments have on the financial statements.
Learning Objectives

Refer to the Review of Learning Objectives at the end of the chapter. It is crucial that this section of the chapter is second nature to you before you attempt the homework, a quiz, or exam. This important piece of the chapter serves as your CliffsNotes or “cheat sheet” to the basic concepts and principles that must be mastered.

If after reading this section of the chapter you still don’t feel comfortable with all of the Learning Objectives covered, you will need to spend additional time and effort reviewing those concepts that you are struggling with.

The following “Tips, Hints, and Things to Remember” are organized according to the Learning Objectives (LOs) in the chapter and should be gone over after reading each of the LOs in the textbook.

Tips, Hints, and Things to Remember

LO1 – Describe the circumstances in which leasing makes more business sense than does an outright sale and purchase.

**Why?** The main reasons why a company might choose to lease, rather than buy, are:
- Leases tend to be easier to obtain for a company that doesn’t have spare cash.
- If the value of the asset declines you aren’t stuck with it.
- If conditions change and you no longer need the asset, or you need a different asset, you are in a more flexible position with a lease.

LO2 – Understand the accounting issues faced by the asset owner (lessor) and the asset user (lessee) in recording a lease transaction.

**Why?** The main issue in lease accounting is who should show ownership of the asset. If it is the lessee, a corresponding liability should also be shown based on the lease payments that are going to be made. Essentially, a capital lease is treated in much the same way as a purchase in which the purchaser is having most, or all, of the deal financed through debt.
LO3 – Outline the types of contractual provisions typically included in lease agreements.

**Why?** Correctly computing the present value of minimum lease payments is important for two reasons. The first is that this number is needed in many cases to determine whether to treat the lease as operating or capital. The second is that, frequently, the present value of the minimum lease payments is also the amount at which, if it is a capital lease, the asset and liability are initially valued.

**How?** You can’t get away from implementing the time value of money. This is yet another instance in which you’ll need to apply time value of money concepts and calculations learned in the prior module in order to come up with correct solutions.

There are two components to lease payments in a capital lease situation—principle and interest. Because of the interest component, the asset and liability associated with a capital lease shouldn’t be valued at the total amount of all the payments. Rather, they should be valued at what the leased asset would cost should cash be paid for it in total today. The excess is essentially interest. Hence, the future payments, guarantees, and bargain purchase amounts need to be brought back to current dollars for valuation purposes.

LO4 – Apply the lease classification criteria in order to distinguish between capital and operating leases.

**How?** The four criteria are all important here. Note that all four criteria need not be met for a lease to be considered a capital lease. If any one or more of the criteria is satisfied, then you have a capital lease for the lessee (and usually get capital lease treatment—with the asset coming off of the books—for the lessor as well). The four criteria are:

1. Title transfer
2. Bargain purchase option
3. Lease term of 75 percent or more of the life of the asset
4. Present value of payments 90 percent or more of the fair value of the asset

Don’t get the 75 and 90 percents confused. A lease term of 80 percent of the life of the asset will always result in a capital lease. If the present value of the payments is 80 percent of the fair value of the asset (cash price if purchased today) you may, or may not, have a capital lease. It will depend on if one of the other criteria is met or not.
LO5 – Properly account for both capital and operating leases from the standpoint of the lessee (asset user).

How? The only tricky part in accounting for an operating lease is to make sure that you properly apply accrual accounting. If a portion of the lease is prepaid, a prepaid asset should be set up. If a portion of the lease is deferred, an accrued expense and liability should result. Other than making sure the expenses coincide with the usage period of the asset (and on the lessor side that the revenue is booked when earned—not just when the cash is received), the entries are straightforward. The lessor (LO6) keeps the asset on their books and depreciates it while recording revenue. The lessee establishes no asset or liability and records expense.

How? Capital leases are more complicated and the accounting for them vary based on the complexity of the lease. The simpler leases are recorded on the lessee’s books at the present value of the payments with a corresponding liability. As the payments are made, the obligation (liability) decreases and interest expense is recorded. The computation of the interest is similar to that for other debt, such as bonds studied in a prior chapter. The leased asset is also amortized (depreciated) over the lesser of the term of the lease or the asset’s useful life.

Executory costs, bargain purchase options, and guaranteed residual values make the entries a bit more complex. Executory costs are expensed as incurred. Bargain purchase options are treated as a final payment, hence, increasing the asset and liability initially established at lease signing. Guaranteed residual values by the lessee are treated like bargain purchase options. If the residual value of the asset at the end of the lease term is less than the guarantee, a loss is reported on the lessee’s books and cash is paid to the lessor, when the asset is returned, for the difference.

LO6 – Properly account for both capital and operating leases from the standpoint of the lessor (asset owner).

How? The are two primary kinds of leases to account for by a lessor: (1) direct financing leases and (2) sales-type leases. In a direct financing lease, the lessor swaps one asset for another—the leased asset for a receivable. Over time, the receivable is reduced and interest revenue is recognized. No cost of goods sold is recognized on the income statement for this kind of lease.

In a sales-type lease, sales revenue and cost of goods sold are recognized. Interest revenue is also recognized over the life of the lease, like in a direct financing lease.
LO7 – Prepare and interpret the lease disclosures required of both lessors and lessees.

**How?** As mentioned in the Overview, numerous disclosures are required with respect to leases, primarily so that those examining financial statements can see how much off-balance-sheet financing the company is engaging in. The key, required disclosure item that can help one to “capitalize” a company’s operating leases are the future minimum rental payments required for operating leases. Imputed interest is also a required disclosure so an approximate rate can be inferred, if it is not disclosed. With these two pieces in hand, a user of the financial statements can artificially capitalize a company’s operating leases to see what that does to their total debt and to significant ratios such as the debt-to-equity ratio.

LO8 – Compare the treatment of accounting for leases in the United States with the requirements of international accounting standards.

**Why?** The treatments for leases are similar between the U.S. and the international standards. However, the international standards don’t have the explicit, four criteria that need be met like in the United States. A little more flexibility is allowed, and at the same time, more professional judgement is required, in applying the international standards.

LO9 – Record a sale-leaseback transaction for both a seller-lessee and a purchaser-lessor.

**Why?** A company may choose to perform a sale-leaseback in order to raise some funds needed now. Alternatively, they could mortgage the property. However, the terms may be more favorable under a sale-leaseback, or the other party may only be willing to provide the funds in a sale situation, rather than as a creditor.

The key element in accounting for a sale-leaseback transaction is the possible profit such a transaction may result in. Since the nature of the transaction hasn’t resulted in a substantial economic change to the entity (since they are, as before, still using the asset they sold), the profit, if any, shouldn’t be immediately recognized.

The following sections, featuring various multiple choice questions, matching exercises, and problems, along with solutions and approaches to arriving at the solutions, is intended to develop your problem-solving and critical-thinking abilities. While learning through trial and error can be effective for improving your quiz and exam scores, and it can be a more interesting way to study than merely re-reading a chapter, that is only a secondary objective in presenting this information in this format.
The main goal of the following sections is to get you thinking, “How can I best approach this problem to arrive at the correct solution—even if I don’t know enough at this point to easily arrive at the proper results?” There is not one simple approach that can be applied to all questions to arrive at the right answer. Think of the following approaches as possibilities, as tools that you can place in your problem-solving toolkit—a toolkit that should be consistently added to. Some of the tools have yet to even be created or thought of. Through practice, creative thinking, and an ever-expanding knowledge base, you will be the creator of the additional tools.

Multiple Choice

MC15-1 (LO1) Which of the following statements is NOT generally a reason why a company would choose to lease an asset?
- a. The lessee anticipates changing technologies will make a different asset needed soon.
- b. The lessee is currently experiencing a cash crunch.
- c. The lessee will pay less over the life of a capital lease than it will pay in a cash purchase today.
- d. The lessee wants automobiles in its fleet that are never more than three years old.

MC15-2 (LO2) Which of the following statements characterizes an operating lease?
- a. The lessee records depreciation and interest.
- b. The lessee records the lease obligation related to the leased asset.
- c. The lessor records depreciation and lease revenue.
- d. The lessor transfers title of the leased property to the lessee for the duration of the lease term.

MC15-3 (LO3) Which of the following would be considered an executory cost?
- a. minimum lease payments
- b. interest expense incurred
- c. bargain purchase option
- d. insurance costs

MC15-4 (LO4) Lease A does not contain a bargain purchase option, but the lease term is equal to 90 percent of the estimated economic life of the leased property. Lease B does not transfer ownership of the property to the lessee by the end of the lease term, but the lease term is equal to 75 percent of the estimated economic life of the leased property. How should the lessee classify these leases?

<table>
<thead>
<tr>
<th>Lease A</th>
<th>Lease B</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. capital lease</td>
<td>operating lease</td>
</tr>
<tr>
<td>b. capital lease</td>
<td>capital lease</td>
</tr>
<tr>
<td>c. operating lease</td>
<td>capital lease</td>
</tr>
<tr>
<td>d. operating lease</td>
<td>operating lease</td>
</tr>
</tbody>
</table>
MC15-5 (LO5) Blagden Company acquires equipment under a noncancelable lease at an annual rental of $45,000, payable each year at the beginning of the year with the first payment being made at the lease’s outset. After five years, there is a bargain purchase option of $75,000. The appropriate interest rate is 12 percent. What is the total present value of the lease and the first year’s interest expense?

a. $224,238; $21,509  
b. $224,238; $26,908  
c. $204,772; $21,509  
d. $204,772; $19,173

MC15-6 (LO6) Anna Company leased equipment to Alyse Company on January 1, 2011. The lease is for an eight-year period expiring on December 31, 2018. The first of eight equal annual payments of $900,000 was made on January 1, 2011. Anna had purchased the equipment on December 29, 2006, for $4,800,000. The lease is appropriately accounted for as a sales-type lease by Anna. Assume that the present value on January 1, 2011, of all rent payments over the lease term discounted at a 10 percent interest rate was $5,280,000. What amount of interest revenue should Anna record in 2012 (the second year of the lease period) as a result of the lease?

a. $490,000  
b. $480,000  
c. $438,000  
d. $391,800

MC15-7 (LO6) On January 1, 2011, Opeth Company leased a warehouse to Melinda Company under an operating lease for ten years at $80,000 per year, payable the first day of each lease year. Opeth paid $36,000 to a real estate broker as a finder’s fee. The warehouse is depreciated at $20,000 per year. During 2011, Opeth incurred insurance and property tax expense totaling $15,000. Opeth’s net rental income for 2011 should be

a. $9,000.  
b. $41,400.  
c. $44,000.  
d. $45,000.

MC15-8 (LO8) In order for a lease to be considered a finance (or capital in United States terminology) lease, international accounting standards require that a lease agreement

a. transfers substantially all risks and rewards incident to ownership of an asset to the lessee.  
b. contains a provision requiring transfer of title to the lessee by the end of the lease term.  
c. provides that the term of the lease contract be longer than one year.  
d. provides for a bargain purchase option.
Kitaro Company owns a building with a book value of $500,000. It has appreciated in value over the years and Kitaro needs cash now. Kitaro sells the building to AMC Financial for $1,000,000 in cash on January 1, 2011, with the agreement that Kitaro can use the building for the next 25 years for an annual payment of $95,000 at the end of each year to AMC. How much profit on the sale of the building should Kitaro recognize for 2011?

a. $500,000  
b. $405,000  
c. $20,000  
d. $0
Matching

Matching 15-1 (LO1, LO2, LO3) Listed below are the terms and associated definitions from the chapter for LO1 through LO3. Match the correct definition letter with each term number.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. lease</td>
<td>a residual value of leased property that reverts to the lessor at the end of the lease term; because there is no guarantee of the residual value, market factors and asset condition determine the value of the leased asset at the end of the lease</td>
</tr>
<tr>
<td>2. lessor</td>
<td>the owner of leased property who transfers the right to use the property to a second party</td>
</tr>
<tr>
<td>3. lessee</td>
<td>the party using property that is owned by another party</td>
</tr>
<tr>
<td>4. noncancelable</td>
<td>a lease contract that can be done away with only under very unlikely circumstances or with extremely expensive penalties to the lessee</td>
</tr>
<tr>
<td>5. bargain purchase option</td>
<td>a lease provision that allows for the purchase of a leased asset in the future by the lessee at a price so low that the lessee is almost certain to exercise the option</td>
</tr>
<tr>
<td>6. lease term</td>
<td>the noncancelable period of a lease designated in the lease contract plus the period of any bargain renewal periods over which the lease is likely to be renewed</td>
</tr>
<tr>
<td>7. bargain renewal option</td>
<td>a lease provision that allows for renewal of the lease by the lessee at significantly reduced lease payments from the original lease; the terms strongly imply that the lease will be renewed</td>
</tr>
<tr>
<td>8. guaranteed residual value</td>
<td>a guarantee by the lessee of a minimum value for the residual value of a leased asset; if the residual value is less than the guarantee, the lessee must pay the difference to the lessor</td>
</tr>
<tr>
<td>9. unguaranteed residual value</td>
<td>a contract specifying the terms under which an owner of property transfers the right to use the property to another</td>
</tr>
</tbody>
</table>
Matching 15-2 (LO4, LO5, LO6, LO7, LO8, LO9) Listed below are the terms and associated definitions from the chapter for LO4 through LO9. Match the correct definition letter with each term number.

___ 1. minimum lease payments  
   a. expenses such as commissions, legal fees, and preparation of documents that are incurred by the lessor in negotiating and completing a lease transaction

___ 2. executory costs  
   b. the interest rate that would discount the minimum lease payments to the fair market value of the leased asset at the lease signing date

___ 3. implicit interest rate  
   c. a lease in which the lessor is primarily engaged in financial activities and views the lease as an investment

___ 4. incremental borrowing rate  
   d. a lease in which the lessor is a manufacturer or dealer utilizing the lease to facilitate the sale of goods

___ 5. direct financing leases  
   e. an arrangement in which the seller becomes the seller-lessee and the purchaser is the purchaser-lessee

___ 6. sales-type lease  
   f. the amounts required over the lease term plus any amount to be paid for the residual value either through a bargain purchase option or a guarantee of residual value

___ 7. initial direct costs  
   g. the interest rate at which the lessee could borrow the amount of money necessary to purchase the leased asset, taking into consideration the lessee’s financial situation and the current conditions in the marketplace

___ 8. sale-leaseback  
   h. expenses to maintain leased property such as repairs, insurance, and taxes

Problems

Problem 15-1 (LO1, LO4, LO5) On January 1, 2011, Graven Images leased ten computers for use in their Engineering department. The lease period is for 13 years and the estimated economic life of the leased property is 15 years. The lease does not contain automatic title transfer or a bargain purchase option. The fair value of the ten computers is $65,000. Lease payments are $9,000 per year, payable each December 31. The incremental borrowing rate for Graven is 12 percent and the implicit interest rate (known by Graven) is 10 percent. The company uses straight-line depreciation for computers such as these.

Provide the necessary journal entries to record the transactions related to this lease for Graven for the period January 1, 2011, through December 31, 2012.

Before entering into the lease, what other items should Graven consider with respect to this lease from both a business and an accounting perspective?
Problem 15-2 (LO5, LO6) On July 1, 2011, Fly With Me leased an aircraft from Boring Aircraft for an initial period of 12 months with a provision for a continuation on a month-to-month basis. The lease is properly classified as an operating lease. Lease payments are to be made as follows:

First two months $15,000 per month
Second three months $12,000 per month
Third three months $10,000 per month
Last four months $8,000 per month

Provide the journal entries required to record the lease payments for the first year on the books of (1) Fly With Me and (2) Boring Aircraft.

Problem 15-3 (LO5) Green Carnation entered into a leasing agreement with Tiamat Rental on January 1, 2011. The lease qualifies as a capital lease and calls for payments of $5,000 for 5 years with the first payment being made on January 1, 2011, and subsequent payments being made on December 31 of each year. Standard’s incremental borrowing rate is 12 percent.

Prepare a schedule amortizing Green Carnation’s lease obligation.

Problem 15-4 (LO6) Static Financing, Inc., purchased a packing machine to lease to Super Fruits. The lease qualifies as a direct financing lease and requires lease payments of $58,860 per year, payable in advance, over a ten-year period. There is no expected residual value. The fair market value of the packing machine is $330,000—the same amount paid by Static Financing to purchase the asset. The lease term begins on January 1, 2011.

Provide the journal entries required on Static’s books to (1) record the lease transaction and the first lease payment, and to (2) recognize interest revenue at the end of the first year. Static uses a calendar-year accounting period. (Round all computations to the nearest dollar.)

Solutions, Approaches, and Explanations

MC15-1
Answer: c
Approach and explanation: Choices a, b, and d are the three, non-accounting advantages given in the chapter for why a company may choose to lease instead of buy. Choice c is not a correct statement. Lessees pay more over time with a capital lease than by paying cash to purchase an asset now because leases have interest included in the payments. Over some very long lease lives, a lessee may pay several times the amount in payments than they would pay if they made the purchase for cash on day one.
MC15-2
Answer: c
Approach and explanation: With a question like this, you are likely going to be looking for three statements that characterize a capital lease and one that characterizes an operating lease. Go through each statement carefully and write an O for operating or a C for capital next to it.

Depreciation is recorded by the (accounting or effective) owner of the asset. The owner is the lessor in an operating lease and the lessee in a capital lease. If you get those confused, think of the word “capital” in capital lease as capitalize. If you are the property holder in a capital lease, then you are the one that capitalizes and depreciates the asset. Therefore, you should put a C next to choice a and move on.

An obligation only exists to the lessee in a capital lease. Put a C next to choice b and move on.

Choice c is essentially the opposite of choice a. So even if you didn’t know the answer, you could probably make an educated guess that it would have to be either choice a or choice c. The lessor remains the owner of the property for accounting purposes and records depreciation for operating leases. Put an O next to choice c and check out choice d before finalizing your answer.

Choice d sounds like choice b, with the lessee having the title and the obligation. We have yet another statement describing a capital lease, so place another C and mark your only O as the correct answer.

Don’t let the word depreciation throw you off. Although the chapter states that leased assets are frequently amortized instead of depreciated, you do see both words used. Think of amortization and depreciation to be synonymous when it comes to leased assets.

MC15-3
Answer: d
Approach and explanation: Examples of executory costs include taxes, maintenance (asset upkeep), and insurance costs. Executory costs are treated differently than other costs in relation to leases.

Executory costs are not included in the minimum lease payment calculations, even if the amounts for executory costs are paid in cash at the same time as the lease payments. Nonexecutory costs are capitalized as part of the leased asset, including the bargain purchase option. Interest expense is part of the minimum lease payments.
MC15-4
Answer: b
Approach and explanation: Recall that of the four criteria, only one needs to be met in order for a lease to be considered a capital lease. One of the criteria is that the lease term is equal to or greater than 75 percent of the estimated economic life of the leased property. Therefore, both leases meet this criterion and both should be considered capital leases.

MC15-5
Answer: a
Approach and explanation: The calculator inputs are:

Set to BEG of period, -75,000 = FV, -45,000 = PMT, 5 = N, 12 = i%, CPT = PV = 224,238

In Excel, the formula is:

=PV(12%,5,-45000,-75000,1)

To compute the first year’s interest, you begin with the total present value before the first payment. You then subtract out the first payment, which, since it was made on the first day, didn’t include any interest. That number is then multiplied by the interest rate as follows:

$224,238 – $45,000 = $179,238 × 0.12 = $21,509

Can you compute the second year’s interest expense? For a reasonableness check, you should expect a number less than $21,509. The calculation is as follows:

$179,238 – ($45,000 – $21,509) = $155,747 × 0.12 = $18,690
MC15-6
Answer: d
Approach and explanation: Let’s look at the journal entries for this problem and see if it helps in arriving at the correct solution.

2011
Jan. 1 Lease Payments Receivable 5,280,000
   Sales 5,280,000
   Cost of Goods Sold 4,800,000
   Inventory 4,800,000
   Cash 900,000
   Lease Payments Receivable 900,000
Dec. 31 Interest Receivable 438,000\(^a\)
   Interest Revenue 438,000

2012
Jan. 1 Cash 900,000
   Interest Receivable 438,000
   Lease Payments 462,000
Dec. 31 Interest Receivable 391,800\(^b\)
   Interest Revenue 391,800

\(^a\)(\$5,280,000 – \$900,000) \times 0.10 = \$438,000
\(^b\)(\$5,280,000 – \$900,000 – \$462,000) \times 0.10 = \$391,800

If you don’t go through the above journal entries, then you’ll probably need to create a partial amortization table. There isn’t necessarily a quick shortcut when you are talking about the second year’s interest revenue.

Notice that the lease receivable is based on the present value and not the total amount of payments that are coming in. This is so the interest component is recognized separately, as earned, and the entire profit isn’t booked immediately as the difference between sales and cost of goods sold.

Also, notice that the first payment does not include any interest revenue since it is made on day one and no interest has yet been earned. The first payment reduces the receivable, dollar-for-dollar, establishing a lower receivable in which the first interest revenue calculation is based on.
There is a way in which you can shortcut a multiple-choice question like this. After computing the first year’s interest revenue and coming up with $438,000, take a look at the choices. Each year’s interest revenue is decreasing because the interest revenue is based on a smaller receivable (getting smaller with each payment). Since only one of the choices is less than $438,000, it must be the correct one. If you aren’t pressed for time, you should check your answer. If you are taking a timed test, choose choice d based on your inference and then come back to check it if you have additional time at the end.

MC15-7
Answer: b
Approach and explanation: For an operating lease, the lessor records revenue as it is earned—not necessarily when cash is received. Costs associated with the rental, that aren’t for a specific year (initial direct costs), are allocated over the term of the lease. Therefore, the calculation is as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rental revenue</td>
<td>$ 80,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>(20,000)</td>
</tr>
<tr>
<td>Insurance and property tax expenses</td>
<td>(15,000)</td>
</tr>
<tr>
<td>Broker fee</td>
<td>(3,600)*</td>
</tr>
<tr>
<td>Net rental income each year</td>
<td>$ 41,400</td>
</tr>
</tbody>
</table>

*$36,000/10 = $3,600

MC15-8
Answer: a
Approach and explanation: There are no major differences in the U.S. and international standards from a theoretical standpoint. Hence, choice a would be correct from a U.S. perspective, as well as for international accounting standards. The international standards don’t require title transfer or a bargain purchase option. In fact, the international standards don’t absolutely require the meeting of any one, or more, of the four criteria spelled out in the U.S. standards. The omission of four explicit criteria in the international standards is the biggest difference between the two sets of standards.

Choice c is where lease accounting standards may be headed in the future (but is not there yet in the U.S. or internationally). If such a standard is adopted, many companies will be forced to capitalize large dollar amounts of operating leases that are currently disclosed but are not on the face of their balance sheets. For such companies, their debt load, for practical purposes, won’t change. From a look at just their revised balance sheet (assuming new standards are ever put into effect), however, the amount of reported debt will increase dramatically in some, if not many, instances.
MC15-9
Answer: c
Approach and explanation: In a sale-leaseback transaction, the new lessee hasn’t changed their position much. They are still using what they previously owned. To deter companies from entering into sale-leaseback transactions in order to inflate their income, the accounting rules state that any gain is to be recognized over the life of the lease.

The $500,000 gain in this case will be recognized over 25 years, so the answer is $20,000 ($500,000/25). The $20,000 won’t help increase income, either, because Kitaro will now have either a lease expense of $95,000 each year (if it is an operating leaseback) or an interest expense well over $20,000 (if it is a capital leaseback).

Sale-leaseback transactions are usually income neutral or income negative and, hence, are not usually entered into in order to artificially inflate a company’s bottom line. If the book value was more than the sales price, the full amount of the loss is recognized immediately. There is no deferral, or recognition over the life of the lease agreement, in the case of a loss.

Matching 15-1
1. c
2. g
3. f
4. i
5. d
6. h
7. b
8. e
9. a

Complete these terminology matching exercises without looking back at the textbook or on to the glossary. After all, you probably won’t have those as a reference at test time. Learning through trial and error causes the item to be learned better and to stick in your memory longer than if you just look at the textbook, glossary, or a dictionary and “cook book” the answers. Sure you may get the answer correct on your first attempt, but missing something is sometimes best for retention. Don’t be afraid of failure while studying and practicing.
Matching 15-2
1. f
2. h
3. b
4. g
5. c
6. d
7. a
8. e

Problem 15-1
The first step is to look at the four criteria of a capital lease to see if any of them are met. If they are, then this is treated as a capital lease. If not, then operating lease accounting treatment is called for.

1. Does title transfer?
   No.

2. Is there a bargain purchase option?
   No.

3. Is the lease term equal to, or greater than, 75 percent of the assets' useful life?
   Yes (13/15 = .867).

You can stop right there and know that this is a capital lease. However, if the number was less than 75 percent, you’d still need to do the following calculation so let’s look at it anyway.

4. Is the present value of payments equal to, or greater than, 90 percent of the assets' fair value?
   Yes.

The first question to ask, before performing the calculation, is which interest rate to use. For the lessee, if both interest rates are known (given in the case of an academic problem), it is always the lower of the two percentages. So, in this case, it is 10 percent, rather than 12 percent.

The calculator inputs are:
Set to END of period, 0 = FV, -9,000 = PMT, 13 = N, 10 = i%, CPT = PV = 63,930

In Excel, the formula is:
=PV(10%,13,-9000)

$63,930/$65,000 = 0.98, so criteria four is met as well.
Here are the entries for a capital lease to the lessee:

2011
Jan. 1 Leased Computers 63,930
Obligations under Capital Lease 63,930
Dec. 31 Amortization Expense 4,918a
Accumulated Amortization 4,918
Obligations under Capital Lease 2,607
Interest Expense 6,393b
Cash 9,000

2012
Dec. 31 Amortization Expense 4,918
Accumulated Amortization 4,918
Obligations under Capital Lease 2,868
Interest Expense 6,132c
Cash 9,000

a $63,930/13 = $4,918
b $63,930 × 0.10 = $6,393
c ($63,930 – $2,607) × 0.10 = $6,132

Before entering into a lease, especially one involving high-tech equipment, Graven Images should consider whether a shorter lease term may be more advantageous, even if it results in higher annual payments. There are three reasons for this:

1. Faster computers, with better features, may become available (long) before this lease expires.

2. Cheaper computers may become available (long) before this lease expires.

3. A shorter lease term will likely take Graven Images out of the third and fourth criteria for a capital lease. This will allow them to not have to show the debt on the face of their balance sheet.
Problem 15-2

(1) July–Aug. 2011:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepaid Rent</td>
<td>4,333</td>
</tr>
<tr>
<td>Rent Expense</td>
<td>10,667*</td>
</tr>
<tr>
<td>Cash</td>
<td>15,000</td>
</tr>
</tbody>
</table>

*($15,000 \times 2) + ($12,000 \times 3) + ($10,000 \times 3) + ($8,000 \times 4)/12 = $10,667

Sept.–Nov. 2011:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepaid Rent</td>
<td>1,333</td>
</tr>
<tr>
<td>Rent Expense</td>
<td>10,667</td>
</tr>
<tr>
<td>Cash</td>
<td>12,000</td>
</tr>
</tbody>
</table>

Dec. 2011.–Feb. 2012:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent Expense</td>
<td>10,667</td>
</tr>
<tr>
<td>Cash</td>
<td>10,000</td>
</tr>
<tr>
<td>Prepaid Rent</td>
<td>667</td>
</tr>
</tbody>
</table>

Mar.–June 2012:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent Expense</td>
<td>10,667</td>
</tr>
<tr>
<td>Cash</td>
<td>8,000</td>
</tr>
<tr>
<td>Prepaid Rent</td>
<td>2,667</td>
</tr>
</tbody>
</table>
(2) July–Aug. 2011:

\[
\begin{array}{l}
\text{Cash} \quad 15,000 \\
\text{Unearned Rent Revenue} \quad 4,333 \\
\text{Rent Revenue} \quad 10,667 \\
\end{array}
\]

Sept.–Nov. 2011:

\[
\begin{array}{l}
\text{Cash} \quad 12,000 \\
\text{Unearned Rent Revenue} \quad 1,333 \\
\text{Rent Revenue} \quad 10,667 \\
\end{array}
\]

Dec. 2011.–Feb. 2012:

\[
\begin{array}{l}
\text{Cash} \quad 10,000 \\
\text{Unearned Rent Revenue} \quad 667 \\
\text{Rent Revenue} \quad 10,667 \\
\end{array}
\]

Mar.–June 2012:

\[
\begin{array}{l}
\text{Cash} \quad 8,000 \\
\text{Unearned Rent Revenue} \quad 2,667 \\
\text{Rent Revenue} \quad 10,667 \\
\end{array}
\]

**Problem 15-3**

<table>
<thead>
<tr>
<th>Date</th>
<th>Payment</th>
<th>Interest Expense*</th>
<th>Principal</th>
<th>Lease Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/11</td>
<td>$5,000</td>
<td>—</td>
<td>$5,000</td>
<td>$20,187**</td>
</tr>
<tr>
<td>12/31/12</td>
<td>5,000</td>
<td>$1,822</td>
<td>3,178</td>
<td>12,009</td>
</tr>
<tr>
<td>12/31/13</td>
<td>5,000</td>
<td>1,441</td>
<td>3,559</td>
<td>8,450</td>
</tr>
<tr>
<td>12/31/14</td>
<td>5,000</td>
<td>1,014</td>
<td>3,986</td>
<td>4,464</td>
</tr>
<tr>
<td>12/31/15</td>
<td>5,000</td>
<td>536</td>
<td>4,464</td>
<td>—</td>
</tr>
</tbody>
</table>

*Interest expense is computed as the current lease obligation multiplied by the interest rate. The difference between the interest expense and the payment serves to reduce principal.

**The calculator inputs are:**

Set to BEG of period, 0 = FV, -5,000 = PMT, 5 = N, 12 = i%, CPT = PV = 20,187

In Excel, the formula is:

=PV(12%,5,-5000,,1)
Problem 15-4

1. 2011

   Jan. 1  
   - Lease Payments Receivable $588,600
   - Equipment Purchased for Lease $330,000
   - Unearned Interest Revenue $258,600

   1 Cash $58,860
   - Lease Payments Receivable $58,860

2. 2011

   Dec. 31  
   - Unearned Interest Revenue $43,382
   - Interest Revenue $43,382*

   *($588,600 – $58,860 – $258,600) × 0.16** = $43,282

   **The calculator inputs are:

   Set to BEG of period, 0 = FV, -58,860 = PMT, 10 = N, 330,000 = PV, CPT = i% = 16

   In Excel, the formula is:

   =RATE(10,-58860,330000,,1)

Glossary

Note that Appendix C in the rear portion of the textbook contains a comprehensive glossary for all of the terms used in the textbook. That is the place to turn to if you need to look up a word but don't know which chapter(s) it appeared in. The glossary below is identical with one major exception: It contains only those terms used in Chapter 15. This abbreviated glossary can prove quite useful when reviewing a chapter, when studying for a quiz for a particular chapter, or when studying for an exam which covers only a few chapters including this one. Use it in those instances instead of wading through the 19 pages of comprehensive glossary in the textbook trying to pick out just those words that were used in this chapter.

bargain purchase option  A lease provision that allows for the purchase of a leased asset in the future by the lessee at a price so low that the lessee is almost certain to exercise the option.

bargain renewal option  A lease provision that allows for renewal of the lease by the lessee at significantly reduced lease payments from the original lease. The bargain terms strongly imply that the lease will be renewed.

direct financing leases  A lease in which the lessor is primarily engaged in financial activities and views the lease as an investment.
executory costs  Costs to maintain leased property such as repairs, insurance, and taxes.

guaranteed residual value  A guarantee by the lessee of a minimum value for the residual value of a leased asset. If the residual value is less than the guarantee, the lessee must pay the difference to the lessor.

implicit interest rate  The interest rate that would discount the minimum lease payments to the fair market value of the leased asset at the lease signing date.

incremental borrowing rate  The interest rate at which the lessee could borrow the amount of money necessary to purchase the leased asset, taking into consideration the lessee’s financial situation and the current conditions in the marketplace.

initial direct costs  Costs such as commissions, legal fees, and preparation of documents that are incurred by the lessor in negotiating and completing a lease transaction.

lease  A contract specifying the terms under which the owner of the property, the lessor, transfers the right to use the property to a lessee.

lease term  The noncancelable period of a lease designated in the lease contract plus the period of any bargain renewal periods over which the lease is likely to be renewed.

lessee  The party using property that is owned by another party (lessor).

lessor  The owner of leased property who transfers the right to use the property to a second party (lessee).

minimum lease payments  The lease payments required over the lease term plus any amount to be paid for the residual value either through a bargain purchase option or a guarantee of residual value.

noncancelable  A lease contract that can be canceled only under very unlikely circumstances or with extremely expensive penalties to the lessee.

sale-leaseback  An arrangement in which one party sells an asset and then immediately leases back and uses the same asset. The seller becomes the seller-lessee and the purchaser is the purchaser-lessee.

sales-type leases  A lease in which the lessor is a manufacturer or dealer utilizing the lease to facilitate the sale of goods.

unguaranteed residual value  A residual value of leased property that reverts to the lessor at the end of the lease term. Because there is no guarantee of the residual value, market factors and asset condition determine the value of the leased asset at the end of the lease.