Investments in Noncurrent Operating Assets—Acquisition

Overview

Operating assets are not the assets that come out of daily operations (cash, accounts receivable, etc.). Rather, they are plant (fixed) assets and other assets required by businesses for the long haul. Without them, the day-to-day operations may not exist. Examples include property, plant, equipment, and intangible assets.

What are these noncurrent operating assets and how do they get recorded on the books? That is what this chapter covers. The accounting for these transactions isn’t always as simple and straightforward as some other transactions like the recording of revenue or the receipt of cash. Sometimes these assets are acquired in basket purchases or as acquisitions of entire companies. Other times payment is deferred so (long-term) debt is affected. Some are not outright purchased but are leased in such a way that the company must account for the lease as though a purchase was made.

Although many companies don’t self-construct their own assets, some do. When they do so and have interest expense, a portion, or all, of their interest expense is capitalized (turned into part of the building as an asset) rather than expensed. This calculation can be somewhat complicated, especially for companies with multiple debt sources.

In terms of the financial statement appearance, there is a big difference between capitalizing a cost and expensing it. When capitalized, it shows up as an asset, which makes the balance sheet look healthier. When expensed, it shows up as a deduction from revenue, which reduces net income and makes the income statement look weaker. Hence, it is important that true expenses are not capitalized. Only costs incurred to create assets should be capitalized. The chapter covers a variety of potential costs and whether each should be expensed or capitalized.

When solitary intangibles are acquired, the accounting is simple. But in many cases, multiple intangibles are acquired simultaneously, intangibles are acquired with parts of other companies, or they are acquired as part of the acquisition of an entire company. Under these instances, the treatment can become more complicated. Although intangibles are frequently created, they are not always, or even usually, recorded. Generally, intangibles need to be purchased to be reflected on a company’s books.
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 – Identify those costs to be included in the acquisition cost of different types of noncurrent operating assets.

How?  The lists of costs to be included seem endless and difficult to remember. Is there an easy way to remember what shows up as a plant asset when a purchase is made? Yes. Essentially, any and every cost incurred to get something up and running is included. Other costs usually do not get included. A good example, since it can fall in both camps depending on what kind it is, is insurance. If I purchase, say, a piece of equipment and pay for insurance for it to get to my factory, then it is an includable cost (along with purchase price, sales tax, shipping, installation, etc.). If, on the other hand, I purchase insurance on the equipment for its useful life of five years, then I don’t include it in the cost of the equipment. Instead, it should be treated as prepaid insurance when purchased and expensed as insurance expense over those five years.

Note that goodwill is never capitalized (turned into an asset on the balance sheet) unless it is purchased. If you are Coca-Cola or Microsoft, you can’t capitalize the excess value of your company above the book or fair value of the net assets as goodwill. If, on the other hand, you are PepsiCo and you buy Coca-Cola for a billion dollars more than Coca-Cola’s net assets’ fair value (if sold individually), then you can capitalize goodwill associated with the purchase.
LO2 – Properly account for noncurrent operating asset acquisitions using various special arrangements, including deferred payment, self-construction, and acquisition of an entire company.

**Why?** Perhaps the most difficult part of this learning objective, indeed of the entire chapter, is capitalizing interest on self-constructed assets. If you understand why capitalization of interest is done, then the calculation aspect becomes easier because you will move away from trying to memorize formulas and formats and towards comprehension not only of the theory but of the way to calculate as well. The calculation becomes almost intuitive, and you can get there without having to remember a set of rules or procedures.

So here is the basis, the why, behind the theory and the calculation. Debt costs money. If a company is building something and has to borrow money to do so, then the money that debt costs should go into the cost of the building as well. With that in mind, the calculation isn’t that difficult. Merely add on the additional debt costs that are incurred to build and you have your answer. Money spent on interest in excess of the construction costs can be assumed to have been used on other activities and is therefore expensed as usual.

LO3 – Separate costs into those that should be expensed immediately and those that should be capitalized, and understand the accounting standards for research and development and oil and gas exploration costs.

**Why?** The theory behind capitalization versus expensing is simply that if a cost is in association with the creation of, or furthering the life of, an asset that has a life beyond the current period, then it should be treated as an asset. And if the cost doesn’t fall under that definition, then it should be expensed as incurred. There are some exceptions, such as R&D, that the book discusses in more detail. Sometimes R&D does act as the creator of an asset, but the R&D is usually expensed anyway.

**Why?** Why bother with oil and gas exploration costs? The answer is that you probably shouldn’t do more than skim this portion of the chapter. The vast majority of companies and CPAs never encounter such transactions. Therefore, unless you live in an area for which this is an issue (Texas perhaps) or your professor discusses it in class, then you are probably safe to scan this portion of the chapter. You are unlikely to encounter questions dealing with it on the CPA Exam as well (but you never know).
LO4 – Recognize intangible assets acquired separately, as part of a basket purchase and as part of a business acquisition.

How? Accounting for business acquisitions will be covered in more detail in your advanced accounting course. There are a few fundamental pieces of acquisition accounting that you should pull out of this chapter, however.

- Cost, or book value, of the target company’s assets is irrelevant.
- Market value is what the acquiring company should use to book the acquired assets.
- After the acquired assets are debited at market value, the acquired liabilities are credited at market value, and Cash (and/or Stock) is credited for amounts paid (given); the remaining debit (to make the entry balance) is to Goodwill.

LO5 – Discuss the pros and cons of recording noncurrent operating assets at their current values.

LO6 – Use the fixed asset turnover ratio as a general measure of how efficiently a company is using its property, plant, and equipment.

How? Look back to the How? on page 3-4 of this guide for the quick and easy way to figure out how to compute a ratio without memorizing a formula (and likely forgetting it or confusing it with another during test time).

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

MC10-1 (LO1) Carli Corporation bought a building lot to construct a new office building. An older home on the building lot was razed immediately so that the office building could be constructed. The cost of purchasing the older home should be
a. recorded as part of the cost of the new building.
b. recorded as part of the cost of the land.
c. written off as an extraordinary item in the year of purchase.
d. written off as a loss in the year of purchase.

MC10-2 (LO2) Donated equipment is to be recorded as a debit to the Equipment account and a credit to
a. Other Income.
b. Retained Earnings.
c. Revenue or Gain.
d. Capital Stock.

MC10-3 (LO2) Avalos, Inc., purchased some plant assets under a deferred payment contract. The agreement was to pay $10,000 per year for ten years beginning a year from now. The plant assets should be valued at
a. $100,000.
b. $100,000 plus imputed interest.
c. present value of a $10,000 annuity for ten years at an imputed interest rate.
d. future value of a $10,000 annuity for ten years at an imputed interest rate.

MC10-4 (LO2) The Barber Corporation acquired land, buildings, and equipment from a bankrupt company at a lump-sum price of $180,000. At the time of acquisition, Barber also paid $12,000 to have the assets appraised. The appraisal disclosed the following values:

<table>
<thead>
<tr>
<th>Asset</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>$120,000</td>
</tr>
<tr>
<td>Buildings</td>
<td>80,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>40,000</td>
</tr>
</tbody>
</table>

What cost should be assigned to the land, buildings, and equipment, respectively?

a. $64,000, $64,000, and $64,000
b. $96,000, $64,000, and $32,000
c. $90,000, $60,000, and $30,000
d. $120,000, $80,000, and $40,000
MC10-5 (LO3) During 2011, Blagden, Inc., a company that doesn’t make software, incurred the following costs:

Research and development services performed by Super Research Company for Blagden $105,000
Testing of preproduction prototype  150,000
Laboratory research aimed at discovery of new knowledge  180,000

In its income statement for the year ended December 31, 2011, Blagden should report research and development expense of
a. $330,000.
b. $180,000.
c. $150,000.
d. $435,000.

MC10-6 (LO3) If the cost of ordinary repairs is capitalized as an addition to the Equipment account during the current year,
a. net income for the current year will be overstated.
b. stockholders’ equity at the end of the current year will be understated.
c. total assets at the end of the current year will not be affected.
d. total liabilities at the end of the current year will be understated.

MC10-7 (LO3) On October 15, Lithia Company incurred the following costs for one of its printing presses:

Purchase of stapling addition $80,000
Installation of addition  12,000
Replacement parts for renovation of press  50,000
Labor and overhead in connection with renovation of press 15,000

Neither the addition nor the renovation increased the estimated useful life of the press. The replacement parts are upgrades over the old parts and will increase future cash flows. What amount of the costs should be capitalized?
a. $0
b. $65,000
c. $130,000
d. $157,000
MC10-8 (LO4) Intangible assets acquired in a basket purchase which does not represent the acquisition of an entire business should be valued by
a. recording separately traded and contract-based intangible assets at their individual fair values with any unallocated purchase price being recognized as goodwill.
b. allocating the total purchase price according to the relative fair values only of intangible assets that are separately tradable or contract-based.
c. allocating the total purchase price according to the relative fair values of all assets acquired, regardless of whether the assets are separately tradable or contract-based.
d. recording separately traded and contract-based intangible assets at their individual fair values with any unallocated purchase price being expensed in the year of acquisition.

MC10-9 (LO4) Which of the following is TRUE regarding the traditional approach to estimating the fair value of an intangible asset?
a. The traditional approach requires the use of the risk-free rate of interest.
b. The traditional approach requires the use of various possible outcomes and their probability of occurrence.
c. The traditional approach requires the assumption that cash flows occur at the beginning of each period (an annuity due).
d. The traditional approach requires the use of judgment in determining a risk-adjusted rate of interest.

MC10-10 (LO4) Which of the following most accurately describes the position taken by current generally accepted accounting principles?
a. Both pooling of interests and the purchase method are still permitted under certain circumstances.
b. Goodwill may arise as a result of a business acquisition accounted for as a pooling of interests.
c. The purchase method results in the assets of the acquired company being recognized on the acquiring company’s balance sheet at their fair value at the date of acquisition.
d. The purchase method requires a company to amortize goodwill after it has purchased another company for more than the fair value of the net assets acquired.
MC10-11 (LO6) Selected information from the 2011 and 2010 financial statements of Hoopes Corporation is presented below. All account balances are not listed, but all of the asset balances are shown below.

<table>
<thead>
<tr>
<th>Account</th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$21,000</td>
<td>$35,000</td>
</tr>
<tr>
<td>Marketable Securities</td>
<td>27,000</td>
<td>22,000</td>
</tr>
<tr>
<td>Accounts Receivable (net)</td>
<td>60,000</td>
<td>98,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>105,000</td>
<td>142,000</td>
</tr>
<tr>
<td>Prepaid Expenses</td>
<td>5,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Land and Building (net)</td>
<td>315,000</td>
<td>247,000</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>57,000</td>
<td>75,000</td>
</tr>
<tr>
<td>Accrued Expenses</td>
<td>10,000</td>
<td>14,000</td>
</tr>
<tr>
<td>Notes Payable (short-term)</td>
<td>8,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Bond Payable</td>
<td>52,000</td>
<td>66,000</td>
</tr>
</tbody>
</table>

Hoopes had cash sales of $750,000 and credit sales of $615,000 during 2011. Cost of goods sold for 2011 was $819,000. Hoopes fixed asset turnover for 2011 is
a. 2.53.
b. 2.97.
c. 4.86.
d. 5.53.
### Matching

**Matching 10-1 (LO1, LO2)** Listed below are the terms and associated definitions from the chapter for LO1 and LO2. Match the correct definition letter with each term number.

<table>
<thead>
<tr>
<th>Term Number</th>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>asset</td>
<td>a. legal or economic rights controlled by a company that are expected to generate future economic benefits</td>
</tr>
<tr>
<td>2</td>
<td>retirement obligation</td>
<td>b. the receipt of assets without being required to give goods or services in return</td>
</tr>
<tr>
<td>3</td>
<td>basket</td>
<td>c. incurred during the self-construction of an asset and is considered to be part of the asset cost</td>
</tr>
<tr>
<td>4</td>
<td>purchase</td>
<td>d. buying a number of assets for one lump-sum price</td>
</tr>
<tr>
<td>5</td>
<td>capital lease</td>
<td>e. a lease that is economically equivalent to the rental of the leased asset</td>
</tr>
<tr>
<td>6</td>
<td>discovery</td>
<td>f. used in the normal course of business that are expected to have a useful life exceeding one year</td>
</tr>
<tr>
<td>7</td>
<td>intangible assets</td>
<td>g. the finding of valuable resources located on property that is already owned</td>
</tr>
<tr>
<td>8</td>
<td>noncurrent operating assets</td>
<td>h. incurred in the act of acquiring a long-term operating asset to restore costs in the future when the asset is retired; required to be recognized at its estimated fair value when it is incurred and be added to the cost of acquiring the long-term operating asset</td>
</tr>
<tr>
<td>9</td>
<td>operating lease</td>
<td>i. a lease that is economically equivalent to the purchase of the leased asset</td>
</tr>
</tbody>
</table>
Matching 10-2 (LO3) Listed below are the terms and associated definitions from the chapter for LO3. Match the correct definition letter with each term number.

___ 1. additions
___ 2. betterments
___ 3. component
___ 4. development
___ 5. full cost method
___ 6. maintenance
___ 7. renewals
___ 8. repairs
___ 9. replacements
___ 10. research
___ 11. research and development (R&D)
___ 12. software development costs
___ 13. successful efforts method
___ 14. technological feasibility

a. activities undertaken to discover new knowledge or apply findings in creating new products, services, processes, or significant improvements of existing ones and to formulate and test products, construct prototypes, and operate pilot plants
b. the stage attained in software development when an enterprise has produced either a detailed program design or a working model
c. developed to account for oil and gas exploratory costs that expenses costs related to dry holes and capitalizes only exploratory costs for successful wells; used by most large, successful oil companies
d. accounting developed to account for oil and gas exploratory costs by capitalizing all exploratory costs; the reasoning is that the cost of drilling dry wells is part of the cost of locating productive wells
e. changes in assets designed to provide increased or improved services
f. expenditures to purchase substitutions of parts or entire units of plant assets
g. enlargements and extensions of existing facilities
h. costs dealing with the creation and production of a piece of software including research, costs incurred after the time technological feasibility has been reached, and costs associated with production of the product
i. activities that involve applying research findings to design a plan for new or improved products and processes; includes the formulation and testing of products, construction of prototypes, and operation of pilot plants
j. expenditures made for overhauling plant assets
k. a portion of a property, plant, or equipment item that is separately identifiable and for which a separate useful life can be estimated
l. investigation to discover new knowledge that will be useful in developing new products, services, or processes or that will result in significant improvements of existing products or processes
m. expenditures made to restore assets to good operating condition upon their breakdown or to restore broken parts
n. expenditures made to keep plant assets in good operating condition
Matching 10-3 (LO4, LO5, LO6) Listed below are the terms and associated definitions from the chapter for LO4 through LO6. Match the correct definition letter with each term number.

___ 1. fixed asset turnover ratio
___ 2. goodwill
___ 3. negative goodwill

1. a residual number, the value of all of the synergies of a functioning business that cannot be specifically identified with any other intangible factor, that is recognized only when it is purchased as part of the acquisition of another company
2. uses financial statement data to roughly indicate how efficiently a company is utilizing its property, plant, and equipment to generate sales; computed as sales divided by net property, plant, and equipment
3. the amount paid for another company that is less than the fair value of the company’s net identifiable items; can arise when the existing management of a company is using the assets in a suboptimal fashion

Exercises

Exercise 10-1 (LO4) Listed below are kinds of intangible assets as well as the five general categories of intangible assets as described in SFAS No. 141. Match each intangible asset listed with one of the five categories. Note that each category can be used more than once or not used at all.

___ 1. franchises
___ 2. trademarks
___ 3. trade secrets
___ 4. Internet domain names
___ 5. customer lists
___ 6. order backlogs
___ 7. copyright
___ 8. patent
___ 9. brand names
___ 10. broadcast rights
___ 11. licenses
___ 12. customer relationships

1. marketing-related intangibles
2. customer-related intangibles
3. artistic-related intangibles
4. contract-based intangibles
5. technology-based intangibles
Problems

Problem 10-1 (LO1) On January 3, 2011, Iggy Corporation purchased a parcel of land as a factory site for $320,000. An old building on the property was demolished and construction begun on a new warehouse that was completed April 30, 2013. Costs incurred (and cash inflows for the last two items sold) on the entire project are listed below.

Demolition of old building $ 28,000
Architect’s fees 31,700
Legal fees—title investigation 4,100
Construction costs 950,000
Imputed interest based on SFAS No. 34 14,000
Landfill for building site 19,300
Clearing of trees from building site 9,600
Insurance on building during construction 5,000
Insurance on building for year beginning April 30, 2013 15,000
Temporary buildings used for construction activities 29,000
Land survey 4,000
Excavation for basement 13,200
Salvage materials from demolition sold 1,800
Timber (after clearing of trees) sold 3,300

Determine the total cost of the land and the new building.

Problem 10-2 (LO2) The Wester Company exchanged 10,000 shares of its own $1 par value common stock for a machine from Westerberg Company. The market value of the Wester Company stock was $52 per share at the date of exchange. The machine had a carrying value of $500,000 on Westerberg’s books.

Record the exchange on the books of Wester Company in general journal form.

Problem 10-3 (LO2) During 2011, Greylan Industries, Inc., constructed a new manufacturing facility at a cost of $7,257,143 before interest considerations. Greylan incurred costs of $1,000,000 during the beginning of January, $3,000,000 at the beginning of March, and $3,257,143 at the beginning of June. The project was completed at the end of December. The company had the following debt outstanding at December 31, 2011:

a. 10 percent, five-year note to finance construction of the manufacturing facility, dated January 1, 2011, $3,600,000.
b. 12 percent, 20-year bonds issued at par on April 30, 2005, $8,400,000.
c. 8 percent, six-year note payable, dated March 1, 2009, $1,800,000.
Determine the amount of interest to be capitalized by Grant Industries for 2011 showing the steps you used to get there in good form.

Solutions, Approaches, and Explanations

**MC10-1**

**Answer:** b

**Approach and explanation:** As strange as it may seem, the cost of the home goes on the balance sheet of Carli as Land. You may ask, “What difference does that make?” The answer is that it makes a great deal of difference. Land is not depreciated, whereas Carli’s new office building will be.

So why does the cost of a home go into the cost of the land and not into the cost of the new building? All costs associated with the purchase, assuming the structures on the land are not kept, will go into the Land account. These costs include legal fees, escrow, and other costs associated with the purchase above and beyond the purchase price. After the land is fully ready for the building, then the additions to the Land account stop. As the building is begun, the subsequent costs will go into the Building account instead of the Land account.

What if we changed the facts a bit and said that the home was furnished and the furnishings were sold prior to razing? Or that the home was lifted off its foundation, moved, and sold? What would happen to the proceeds received? Remember this is a purchase, so obtaining money from the deal isn’t normally how one would think about a purchase. So let’s say that the price was $700,000, escrow (title, commissions, etc.) was $50,000, and the furniture and/or building was sold for $25,000. What amount should be recorded as land by Carli with these new facts in place? The answer is $725,000, computed as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase price</td>
<td>$700,000</td>
</tr>
<tr>
<td>Escrow</td>
<td>$50,000</td>
</tr>
<tr>
<td>Proceeds from sale</td>
<td>$(25,000)</td>
</tr>
<tr>
<td><strong>Total land</strong></td>
<td><strong>$725,000</strong></td>
</tr>
</tbody>
</table>

**MC10-2**

**Answer:** c

**Approach and explanation:** Don’t confuse the accounting treatment for donated assets with that used for acquisitions of assets by issuing securities. In this case, securities are *not* issued so you should *not* credit Capital Stock (or Common Stock or Paid-In Capital in Excess of Par).
So now that you have eliminated one of the choices, which of the other three is the correct one? Choice a, Other Income, is not an account that would ever be credited. Other Income is a description for a kind of account grouping on the income statement, not an account title itself.

If Retained Earnings were to receive a credit, then the income statement would not be affected by this transaction. That is an incorrect treatment in this case. The income statement should reflect the donated asset in the period in which it is received, so Retained Earnings can be eliminated as a possible correct choice. This leaves you with just Revenue or Gain being the correct answer.

If the company doesn’t normally receive donated assets (i.e., it isn’t a nonprofit organization), then Gain will be the most likely credit, and the Gain will show up under the Other Income section of the income statement. For a nonprofit organization in the business of receiving donated assets, Revenue would receive the credit.

**MC10-3**
Answer: c
Approach and explanation: Assets should be valued at their cash purchase price or fair value. Had these plant assets been purchased for cash, Avalos would not have had to pay $100,000 (or more). Had cash (or a very short-term Account Payable) been paid (or established), Avalos would have paid much less than $100,000. Avalos is going to pay $100,000, but that is because Avalos can’t pay it all now. Avalos is going to be paying not only for the assets but also for interest expense on the assets since the payments are spread out into the future.

The only one of the choices that is an amount less than $100,000 is choice c. Choices b and d are both for amounts larger than $100,000.

**MC10-4**
Answer: b
Approach and explanation: There are at least two possible approaches to this question. If you know your stuff, you can ignore the choices, do the calculation, and only then look at the choices to match your calculation to the correct one. Doing so yields the following:

Total cost to be allocated equals purchase price plus appraisal cost ($180,000 + $12,000 = $192,000).

<table>
<thead>
<tr>
<th>Asset</th>
<th>Cost</th>
<th>Percentage</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>$120,000</td>
<td>$120,000/$240,000 = 0.50</td>
<td>$96,000</td>
</tr>
<tr>
<td>Buildings</td>
<td>$80,000</td>
<td>$80,000/$240,000 = 0.33</td>
<td>$64,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>$40,000</td>
<td>$40,000/$240,000 = 0.167</td>
<td>$32,000</td>
</tr>
</tbody>
</table>

*$120,000 + $80,000 + $40,000 = $240,000
Another way to solve this problem, since it is in a multiple choice format, is by a process of elimination. The easiest non-correct choices to knock out of the running are those that don’t add up to the total purchase price. After all, you can’t have a journal entry that doesn’t balance or looks something like this:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>120,000</td>
</tr>
<tr>
<td>Buildings</td>
<td>80,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>40,000</td>
</tr>
<tr>
<td>?</td>
<td>48,000</td>
</tr>
<tr>
<td>Cash</td>
<td>192,000</td>
</tr>
</tbody>
</table>

So by merely adding up the accounts in the choices and seeing which ones don’t equal $192,000, you can safely knock out some incorrect choices. Choices c and d don’t add up to $192,000, so they can’t be correct. A quick look at choice a will tell you that it assumes that the assets have the same appraised value, but you know that isn’t correct, so choice a can’t be correct either. And so you are left with the only possible correct choice of b without even having done the calculation necessary were this an open-ended question.

So which method is better? That depends. If time is of the essence, then the second method is probably quicker. If time isn’t a factor, then you should do it both ways to check yourself. In any event, you should know how to solve this question using the first method in case it isn’t offered to you as a multiple choice question (or so that you can figure it out if one of the choices is something more difficult to quickly eliminate like “$94,000, $66,000, and $32,000”).

**MC10-5**
Answer: d
Approach and explanation: Look at each of these three costs individually before ever looking at the choices. Don’t let the choices sway you. Adding up which amounts are included in the choices most frequently and then trying to derive the correct answer that way is a guess at best, and probably not a very good one.

The first cost is incurred by another company, but since it is for research that Blagden is commissioning and purchasing, it will be a R&D expense to Blagden, not to Super Research Company.

What if this were reversed? What if Blagden was performing the research for another company? Then it would not be an R&D expense to Blagden. Instead, it would be cost of goods sold (for the actual costs incurred) to Blagden and revenue to Blagden for the amount at which it was commissioned. The company that commissioned it would show an R&D expense for the same amount as Blagden shows as revenue.

The second cost is one of those specifically mentioned in SFAS 2 as being an R&D cost that should be expensed as incurred.
The third cost is, likewise, one of those specifically mentioned in SFAS 2 and should, therefore, be expensed as well.

Hence, all three costs should show up as R&D expenses on Blagden’s income statement for the year.

What if Blagden was a software company? Then the answer may change depending on what stage in the software development the company is in. If technological feasibility has been established, then the costs should be capitalized. That sounds like it would only be possible for the first two costs as the third one of “discovery of new knowledge” is clearly before technological feasibility.

None of the costs seem inventoriable. If the software product was already released, then the costs related to burning the software onto CDs and the like would show up in inventory (and cost of goods sold when actually sold).

**MC10-6**

Answer: a

Approach and explanation: These kinds of questions are good ones to use t-accounts on. I don’t recommend just doing them in your head or selecting the first one that looks correct. Rather, work them out in T-account format, and then go through each choice to see if each choice is true or false. Don’t necessarily pick the first true choice you come upon. Make sure that you come up with one true and three falses before making your final selection.

So here, then, is what things should look like in T-account format and what they currently look like:

a. Should be:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Repair Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
<td>1,000</td>
</tr>
<tr>
<td>10,000</td>
<td>1,000</td>
</tr>
</tbody>
</table>

b. As is:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Repair Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000</td>
<td>1,000</td>
</tr>
<tr>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>11,000</td>
<td>0</td>
</tr>
</tbody>
</table>
So with this visual in front of you, what are some conclusions you can draw about the incorrectness of the financial statements?

- Equipment is overstated.
- Assets are overstated.
- Expenses are understated.
- Net income is overstated.
- Retained earnings are overstated.
- Stockholders’ equity is overstated.
- Liabilities are unaffected.
- Revenue is unaffected.

Comparing these conclusions to the choices, you can see that choice a is correct and the other three choices are incorrect.

**MC10-7**

Answer: d

Approach and explanation: Before reading the choices or even the question, for that matter, you need to have it clear in your mind what kinds of costs are capitalized. When it comes to post-acquisition expenditures, additions (of a material nature) will always be capitalized even if the additions don't extend the useful life of the asset. The assumption behind the word “addition” is that even if it doesn't add to the useful life, it will increase future cash flows and, hence, should be classified as an asset. (See Exhibit 10-7 in the textbook.)

The alternative, in this case, would have been to purchase a stapling machine, and clearly, that would have been capitalizable like any new asset purchase. Additions, like original purchases, include the full cost of the addition (meaning things like sales tax, shipping, overhead, installation, etc. are included and not expensed).

When it comes to replacing parts, things get a little more fuzzy. If a part gets replaced and it doesn’t increase the useful life or increase future cash flows, then it is considered an ordinary repair and maintenance type of expense. If, however, it increases the useful life or increases future cash flows (because it increases productivity above the prior working part), then it is capitalized. Again, all costs (including overhead and labor in this case) are included in the capitalization.
Whether a plant asset account gets debited or a contra-asset like Accumulated Depreciation gets debited doesn’t make much of a difference in terms of capitalization. So long as one of these two accounts is debited, instead of an expense account, capitalization takes place.

**MC10-8**

**Answer:** c

**Approach and explanation:** The first item to note here is how goodwill can be recorded from an accounting standpoint. Internally generated goodwill cannot be recorded. The only time goodwill can be recorded is when an entire business is purchased. If a company buys just a patent, and pays more than market value for it, they don’t record goodwill. They record the patent at the price they paid for it.

There is no real difference when multiple assets are involved. Hence, choice a is not correct. Choice a would be correct if the question was reworded to say:

> “Intangible assets acquired in a basket purchase which represents the acquisition of an entire business should be valued by…”

Choice b would exclude other assets purchased, which wouldn’t make any sense. Here is what choice b would look like if a company purchased for $500,000 a patent along with the factory and machinery that made the item the patent was for.

<table>
<thead>
<tr>
<th>Factory</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery</td>
<td>0</td>
</tr>
<tr>
<td>Patent</td>
<td>500,000</td>
</tr>
<tr>
<td>Cash</td>
<td>500,000</td>
</tr>
</tbody>
</table>

Does the above seem reasonable if the patent could only be sold separately for $10? Of course not.

Choice d is incorrect because something that is purchased that is expected to provide future economic benefit in subsequent periods should not be expensed (with the exception of R&D, which is almost always expensed). Choice d also would assign a zero value to tangible assets, similar to what choice b does and is illustrated above as not being sensical.

**MC10-9**

**Answer:** d

**Approach and explanation:** The traditional approach to valuation is simply the present value of the expected future cash flows. Since the interest rate is not fixed, a conservative (higher) rate is generally chosen to build risk into the calculation. With that in mind, let’s look at the choices.
Choice a is incorrect because a risk-free rate would yield a higher present value for the intangible than is certain. Since the amounts received from the intangible are uncertain, a cushion, of sorts, is built into the calculation by using a rate higher than the risk-free rate.

Choice b would be correct if we were discussing the “expected cash flow approach.” The traditional approach does not explore various possible outcomes like the expected cash flow approach does.

Choice c is incorrect because it is overly restrictive. The traditional approach can be used with unequal or uneven payments, payments at the beginning, payments at the end, or even a single payment (perhaps a single sales price a few years from now of the intangible) at some point in the future.

Choice d is the correct one. Based on the knowledge surrounding the accuracy of the assumed payments, the rate can be much higher than the risk-free rate (if the accuracy is in doubt) or very close to the risk-free rate (if, for instance, there is a long track record of payments and no expected changes in the future). There isn’t a risk-adjusted rate of interest that is set in stone and that must be used.

**MC10-10**
Answer: c
Approach and explanation: Just a few items to note:

- The pooling of interests method is no longer allowed under GAAP or under the IASB standards.

- Goodwill arises only in acquisitions accounted for under the purchase method—and only then when the price was more than the fair value of the net assets acquired.

- Goodwill is never amortized for financial accounting purposes. It is amortized for income tax purposes, however. Also, it can be written down for financial accounting purposes when impairment occurs. (See Chapter 11 for more on asset impairment.)

**MC10-11**
Answer: c
Approach and explanation: Recall from the How? on page 3-4 of this guide that when asked to compute a turnover ratio, you look to the words before turnover to figure the denominator. In this case, those words are “fixed asset,” which means that only the average fixed asset balance should be in the denominator.
Most of the information provided is not needed. Some students will see the large amount of information and try to use it all. Or, sometimes, they will miss the word “fixed” and then proceed to add up all of the assets for the denominator. Do not make it harder than it already is. Just find the average of the fixed assets. In this case, there is only one fixed asset account, “Land and Building (net).” The average is $315,000 + $247,000 = $562,000/2 = $281,000.

So what goes into the numerator? In general, for a turnover ratio, the answer is sales. Don’t automatically assume it is sales, however. Think for a minute whether total sales makes sense as the numerator. “Fixed asset turnover” sounds like we want to know how many times fixed assets are turned into something. Would something else like “credit sales only” or “cost of goods sold” make more sense than total sales? No. If we were talking about inventory turnover, then yes, cost of goods sold would make more sense, but fixed assets don’t get turned into cost of goods sold, so we should stick with total sales. If returns and allowances were given separately, then those should be subtracted from total sales in figuring the numerator.

The ratio, therefore, turns out to be:

\[
\frac{($750,000 + $615,000)}{281,000}
\]

If the word “fixed” were dropped from the question, then choice a would be correct as follows:

\[
\frac{($750,000 + $615,000)}{540,000}
\]

\[
*($21,000 + $27,000 + $60,000 + $105,000 + $5,000 + $315,000 + $35,000 + $22,000 + $98,000 + $142,000 + $3,000 + $247,000)/2 = $540,000
\]

Matching 10-1
1.  h
2.  d
3.  i
3.  c
4.  g
5.  b
6.  a
7.  f
8.  e
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 10-2**
1. g  
2. e  
3. k  
4. i  
5. d  
6. n  
7. j  
8. m  
9. l  
10. a  
11. h  
12. c  
13. b

**Matching 10-3**
1. b  
2. a  
3. c

**Exercise 10-1**
1. d  
2. a  
3. e  
4. a  
5. b  
6. b  
7. c  
8. e  
9. a  
10. d  
11. d  
12. b
I wouldn’t recommend trying to memorize this list. There are just too many items on it, and you aren’t likely to see more than one question on a test or a quiz related to it. Better than memorization would be to simply go through this matching exercise once or twice and conscientiously think about where each one makes the most sense. You may miss one or two on the first go around, but if you are careful and really think things through, you should get them all correct by your second attempt.

Problem 10-1
Note that the problem indicates that you are to come up with an amount for both land and a building. Sometimes students provide only one total number instead of two. As discussed in the explanation to MC10-1, land is not depreciated, whereas a building is, so the amounts need to be segregated. A company cannot blend its costs for land and a building together.

**Land**
- Cost $320,000
- Demolition of old building 28,000
- Legal fees—title investigation 4,100
- Landfill for building site 19,300
- Clearing of trees from building site 9,600
- Land survey 4,000
- Salvage materials from demolition sold (1,800)
- Timber (after clearing of trees) sold (3,300)
- Total $379,900

**Building**
- Construction costs $950,000
- Architect’s fees 31,700
- Imputed interest based on SFAS No. 34 14,000
- Insurance on building during construction 5,000
- Temporary buildings used for construction activities 29,000
- Excavation for basement 13,200
- Total $1,042,900

Problem 10-2
As mentioned in prior chapters, when asked to create a journal entry, start with the piece(s) that you know and then the parts that you don’t know may be easier to figure out.

Let’s start, first of all, with the asset that Wester is receiving. Wester is obtaining a machine with a value of $52,000 (10,000 × $52). So we can begin our “skeleton” entry like this:
Now you may be thinking, “What do I do with the $500,000?” Be very careful with what you do with the $500,000 because you may stick it in the wrong place and get nearly everything else incorrect by doing so. Read the question again carefully before just plopping it somewhere. You are asked to record the entry on Wester’s books—not Westerberg’s. Since the $500,000 is on Westerberg’s books, you need not do anything with it on Wester’s books. As for what Westerberg should do with it, well, you’ll just have to wait until Chapter 11 for the answer to that question as it hasn’t been covered yet.

So what else does Wester need to do? Wester got a machine and correctly debits Machinery for the acquisition of it. What did Wester give up? If it was cash, then the Cash account would get the credit. If it was a note, then Notes Payable would get the credit. But in this case, stock is given up. So here is the second piece of the entry:

\[
\text{Machinery} \quad 520,000 \\
\text{Common Stock} \quad 10,000^* \\
\]

\[^* (10,000 \times $1) = $10,000\]

The final piece needs to bring the entry into balance. It also needs to account for the fact that the stock isn’t trading at par value. So the final part of the entry is a plug to the account that can fulfill those two issues.

\[
\text{Machinery} \quad 520,000 \\
\text{Common Stock} \quad 10,000^* \\
\text{Paid-In Capital in Excess of Par} \quad 510,000 \\
\]

**Problem 10-3**

The first thing to do is to compute the average accumulated expenditures (AAE) as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
<th>Fraction of Year</th>
<th>Average Accumulated Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/11</td>
<td>$1,000,000</td>
<td>12/12</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>3/1/11</td>
<td>3,000,000</td>
<td>10/12</td>
<td>2,500,000</td>
</tr>
<tr>
<td>6/1/11</td>
<td>3,257,143</td>
<td>7/12</td>
<td>1,900,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$5,400,000</td>
</tr>
</tbody>
</table>
Next, we need to figure out what the avoidable interest was on the total average accumulated expenditures. The first piece of average accumulated expenditures goes directly against financing obtained specifically for the project. Since the average accumulated expenditures is more than the amount borrowed for the project, then we assume that the excess came from other financing sources on a weighted-average basis.

<table>
<thead>
<tr>
<th>Average Accumulated Expenditures</th>
<th>Applicable Interest Rate</th>
<th>Avoidable Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>$36,000,000</td>
<td>10%</td>
<td>$360,000</td>
</tr>
<tr>
<td>1,800,000</td>
<td>11.29%*</td>
<td>203,220</td>
</tr>
<tr>
<td>$ 5,400,000</td>
<td></td>
<td>$563,220</td>
</tr>
</tbody>
</table>

*Calculation of weighted-average interest rate:

<table>
<thead>
<tr>
<th>Principal</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>12% bonds</td>
<td>$8,400,000</td>
</tr>
<tr>
<td>8% note payable</td>
<td>1,800,000</td>
</tr>
<tr>
<td><strong>$10,200,000</strong></td>
<td><strong>$1,152,000</strong></td>
</tr>
</tbody>
</table>

$1,152,000/$10,200,000 = 11.29% (rounded)

Finally, we compare the actual interest cost to the avoidable interest cost.

Actual interest cost incurred during 2011:

| Construction loan | $ 360,000^a |
| 12% bonds | 1,008,000^b |
| 8% note payable | 144,000^c |
| **$1,512,000** |

^a($3,600,000 × 10%) = $360,000
^b($8,400,000 × 12%) = $1,008,000
^c($1,800,000 × 8%) = $144,000

The interest that should be capitalized for 2011 by Greylan Industries, Inc., is $563,220 (the lesser of the avoidable interest of $563,220 and the actual interest cost incurred of $1,512,000).

What if this project wasn’t finished in 2011? Then, the beginning amount that would go into 2012’s average accumulated expenditures calculation would be $7,820,363 ($7,257,143 in costs + $563,220 in capitalized interest). Let’s say that the project was finished at the end of June 2012 and there was a cost of $1,000,000 incurred on March 1, 2012. The average accumulated expenditures calculation for 2012 would look like this:
<table>
<thead>
<tr>
<th>Date</th>
<th>Amount</th>
<th>Fraction of Year</th>
<th>Average Accumulated Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1/12</td>
<td>$7,820,363</td>
<td>6/6</td>
<td>$7,820,363</td>
</tr>
<tr>
<td>3/1/12</td>
<td>1,000,000</td>
<td>4/6</td>
<td>666,667</td>
</tr>
</tbody>
</table>

**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 10. 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 that 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.

**additions**  Enlargements and extensions of existing facilities.

**asset retirement obligation**  Obligation incurred in the act of acquiring a long-term operating asset to restore costs in the future when the asset is retired. Required to be recognized at its estimated fair value when it is incurred and be added to the cost of acquiring the long-term operating asset.

**basket purchase**  The purchase of a number of assets for one lump-sum purchase price.

**betterments**  Changes in assets designed to provide increased or improved services.

**capital lease**  A lease that is economically equivalent to the purchase of the leased asset.

**capitalized interest**  Interest incurred during the self-construction of an asset that is considered to be part of the asset cost.

**component**  A portion of a property, plant, or equipment item that is separately identifiable and for which a separate useful life can be estimated.

**development**  Activities that involve applying research findings to develop a plan or design for new or improved products and processes; includes the formulation, design, and testing of products; construction of prototypes; and operation of pilot plants.

**discovery**  The finding of valuable resources located on property that is already owned.
**donation**  The receipt of assets without being required to give goods or services in return.

**fixed asset turnover ratio**  A ratio that uses financial statement data to roughly indicate how efficiently a company is utilizing its property, plant, and equipment to generate sales; computed as sales divided by net property, plant, and equipment.

**full cost method**  A method of accounting developed to account for oil and gas exploratory costs by capitalizing all exploratory costs; the reasoning is that the cost of drilling dry wells is part of the cost of locating productive wells.

**goodwill**  A residual number, the value of all of the synergies of a functioning business that cannot be specifically identified with any other intangible factor, that is recognized only when it is purchased as part of the acquisition of another company.

**intangible assets**  Legal or economic rights controlled by a company that are expected to generate future economic benefits.

**maintenance**  Expenditures made to maintain plant assets in good operating condition.

**negative goodwill**  Term used to describe the amount paid for another company that is less than the fair value of the company’s net identifiable items; can arise when the existing management of a company is using the assets in a suboptimal fashion.

**noncurrent operating assets**  Assets used in the normal course of business that are expected to have a useful life exceeding one year, or one operating cycle, whichever is longer.

**operating lease**  A lease that is economically equivalent to the rental of the leased asset.

**renewals**  Expenditures made for overhauling plant assets.

**repairs**  Expenditures made to restore assets to good operating condition upon their breakdown or to restore and replace broken parts.

**replacements**  Expenditures to purchase substitutions of parts or entire units of plant assets.

**research**  Investigation to discover new knowledge that will be useful in developing new products, services, or processes or that will result in significant improvements of existing products or processes.

**research and development (R&D)**  Activities undertaken to discover new knowledge or apply research findings in developing new products, services, processes, or significant improvements of existing ones and to formulate, design, and test products; construct prototypes; and operate pilot plants.

**software development costs**  Costs dealing with the creation and production of a piece of software including research and development, costs incurred after the time technological feasibility has been reached, and costs associated with production of the product.
successful efforts method  An accounting method developed to account for oil and gas exploratory costs that expenses costs related to dry holes and capitalizes only exploratory costs for successful wells; used by most large, successful oil companies.

technological feasibility  Stage attained in software development when an enterprise has produced either a detailed program design or a working model.