

Recording Business Transactions

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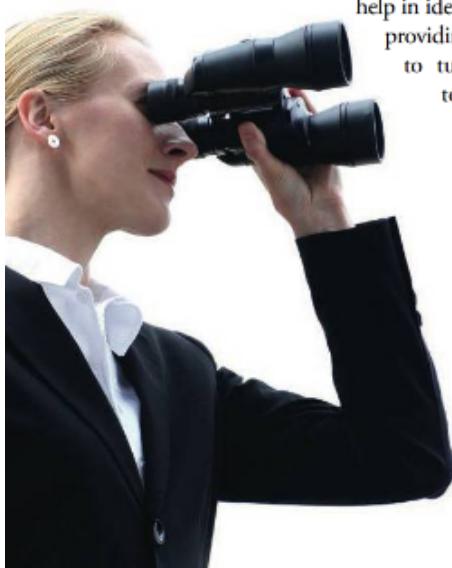
Where's the Money?

Rachel Long scoured through the stacks of printouts. She had been hired to work on an embezzlement (stealing cash or assets of an entity) case for a local school district. The chief financial officer had called her because he suspected one of his employees was stealing money from the Parent Teacher Association (PTA). Rachel loved working on embezzlement cases. She enjoyed searching through the financial statements, identifying a problem, and then finding the transactions that documented the embezzlement. Rachel knew that if she looked deeply enough she would find the evidence that money was stolen. She always treated these cases as a puzzle that needed to be solved.

Sometimes businesses are unfortunate enough to have employees steal from them, and they need help in identifying the thief and providing enough evidence to turn the matter over to a law enforcement agency. Businesses often turn to an

accountant, such as Rachel, who specializes in fraud, often called a certified fraud examiner. In addition, businesses hire accountants to help protect their assets by identifying potential problems in their recordkeeping and control of cash and assets.

Where will Rachel start looking when she begins searching for the stolen money? She'll start at the source, by reviewing documents such as invoices, sales receipts, and bank deposit slips. She will then review the transactions that were recorded (or not recorded) from those documents. These two pieces will help Rachel determine whether money was stolen from the school district and how the embezzlement occurred. It's important to Rachel that she not only catches the thief, but also helps the school district prevent losses in the future. She will use her knowledge and experience in accounting to help her.



Why Is Recording Business Transactions Important?

Accounting is based on transactions. The recording of those transactions is based on source documents that provide the proof of the financial position of the business. The lack of that proof can lead to discoveries of stolen money and fictitious financial statements. As an example, when an employee at WorldCom, Inc., a long distance telephone company, found a \$500 million accounting entry without any evidence to support it, it led to the discovery of a \$3.8 billion fraud. The recording of transactions from source documents is the first step in the accounting process—and one of the most important. In this chapter, you learn about source documents and how to record transactions.

Chapter 2 Learning Objectives



- 1 Explain accounts as they relate to the accounting equation and describe common accounts
- 2 Define debits, credits, and normal account balances using double-entry accounting and T-accounts
- 3 Record transactions in a journal and post journal entries to the ledger
- 4 Prepare the trial balance and illustrate how to use the trial balance to prepare financial statements
- 5 Use the debt ratio to evaluate business performance

Smart Touch Learning started out by recording the company's business transactions in terms of the accounting equation. That procedure works well when learning how to analyze transactions, but it's not a method in which a real-world business actually records transactions. In this chapter, you learn a more efficient way to capture business transactions. First, we need to start with a review of the accounting equation.

WHAT IS AN ACCOUNT?

Learning Objective 1

Explain accounts as they relate to the accounting equation and describe common accounts

Account

A detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specific period.

I get confused by the difference between Accounts Receivable and Accounts Payable. Is there an easy way to remember these two accounts?



Recall that the basic tool of accounting is the accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

The accounting equation is made up of three parts or categories: assets, liabilities, and equity. Each category contains accounts. An **account** is the detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specified period.

Assets

Assets are economic resources that are expected to benefit the business in the future—something the business owns or has control of that has value. Exhibit 2-1 contains a list of asset accounts that most businesses use.

Liabilities

Recall that a *liability* is a debt—that is, something the business owes. A business generally has fewer liability accounts than asset accounts. Exhibit 2-2 contains examples of common liability accounts.

You might be confused by the difference between the asset account, *Accounts Receivable*, and the liability account, *Accounts Payable*. An easy way to remember the distinction between these two accounts involves the words *Receivable* and *Payable*. A *receivable* involves a future *receipt* of cash. A *payable* involves a future *payment* of cash.

Exhibit 2-1 | Asset Accounts

Account Name	Explanation
Cash	A business's money. Includes bank balances, bills, coins, and checks.
Accounts Receivable	A customer's promise to pay in the future for services or goods sold. Often described as "On Account."
Notes Receivable	A written promise that a customer will pay a fixed amount of money and <i>interest</i> by a certain date in the future. Usually more formal than an Accounts Receivable.
Prepaid Expense	A payment of an expense in advance. It is considered an asset because the prepayment provides a benefit in the future. Examples of prepaid expenses are <i>Prepaid Rent</i> , <i>Prepaid Insurance</i> , and <i>Office Supplies</i> .
Equipment, Furniture, and Fixtures	The cost of equipment, furniture, and fixtures (such as light fixtures and shelving). A business has a separate asset account for each type.
Building	The cost of an office building, a store, or a warehouse.
Land	The cost of land a business uses in operations.

Exhibit 2-2 | Liability Accounts

Account Name	Explanation
Accounts Payable	A promise made by the business to pay a debt in the future. Arises from a credit purchase.
Notes Payable	A written promise made by the business to pay a debt, usually involving <i>interest</i> , in the future.
Accrued Liability	An amount owed but not paid. A specific type of payable such as <i>Taxes Payable</i> , <i>Rent Payable</i> , and <i>Salaries Payable</i> .
Unearned Revenue	Occurs when a company receives cash from a customer but has not provided the product or service. The promise to provide services or deliver goods in the future.

Notes Payable

A written promise made by the business to pay a debt, usually involving interest, in the future.

Accrued Liability

A liability for which the business knows the amount owed but the bill has not been paid.

Unearned Revenue

A liability created when a business collects cash from customers in advance of providing services or delivering goods.

Equity

The owner's claim to the assets of the business is called equity or owner's equity. As shown in [Exhibit 2-3](#), a company has separate accounts for each element of equity.

Exhibit 2-3 | Equity Accounts

Account Name	Explanation
Owner, Capital	Represents the net contributions of the owner in the business. Increases equity.
Owner, Withdrawals	Distributions of cash or other assets to the owner. Decreases equity.
Revenues	Earnings that result from delivering goods or services to customers. Increases equity. Examples include <i>Service Revenue</i> and <i>Rent Revenue</i> .
Expenses	The cost of selling goods or services. Decreases equity. Examples include <i>Rent Expense</i> , <i>Salaries Expense</i> , and <i>Utilities Expense</i> .

Chart of Accounts

Chart of Accounts

A list of all of a company's accounts with their account numbers.

Companies need a way to organize their accounts. They use a [chart of accounts](#) to do this. A chart of accounts lists all company accounts along with the account numbers. The chart of accounts for Smart Touch Learning appears in [Exhibit 2-4](#). Account numbers are just shorthand versions of the account names. One account number equals one account name—just like your Social Security number is unique to you.

It can be confusing to choose the correct account to use when there are multiple accounts that sound similar. As an example, let's think about rent. There are four types of rent accounts: Prepaid Rent (asset), Rent Payable (liability), Rent Revenue (equity), or Rent Expense (equity). It is important that we understand the definition of each type of account so that we can use the account correctly. Prepaid Rent represents a prepayment of cash for renting a building in the future. Rent Payable represents a debt owed for renting a building currently, and Rent Expense represents the cost of renting a building currently. Rent Revenue, on the other hand, relates to the earning of revenue related to renting the building to a tenant currently.

Account numbers usually have two or more digits. Assets are often numbered beginning with 1, liabilities with 2, owner's equity with 3, revenues with 4, and expenses with 5. The second and third digits in an account number indicate where the account fits within the category. For example, if Smart Touch Learning is using three-digit account numbers, Cash may be account number 101, the first asset account. Accounts Receivable may be account number 111, the second asset. Accounts Payable may be account number 201, the first liability. When numbers are used, all accounts are numbered by this system. However, each company chooses its own account numbering system.

Notice in [Exhibit 2-4](#) the gap in account numbers between 121 and 141. Smart Touch Learning may need to add another asset account in the future. For example, the business may start selling some type of inventory and want to use account number 131 for Merchandise Inventory. So, the chart of accounts will change as the business evolves.

Exhibit 2-4 | Chart of Accounts—Smart Touch Learning

Balance Sheet Accounts		
Assets	Liabilities	Equity
101 Cash	201 Accounts Payable	301 Owner, Capital
111 Accounts Receivable	211 Salaries Payable	311 Owner, Withdrawals
121 Notes Receivable	221 Interest Payable	
141 Office Supplies	231 Unearned Revenue	
151 Furniture	241 Notes Payable	
171 Building		
191 Land		

Income Statement Accounts (Part of Equity)	
Revenues	Expenses
401 Service Revenue	501 Rent Expense
411 Interest Revenue	511 Salaries Expense
	521 Utilities Expense
	531 Advertising Expense

The chart of accounts varies from business to business, though many account names are common to all companies. For example, you will find Cash on every company's chart of accounts. The chart of accounts contains the list of account names you will use to record a transaction.

Ledger

In addition to a chart of accounts, companies need a way to show all of the increases and decreases in each account along with their balances. Companies use a **ledger** to fulfill this task. A ledger is a collection of all the accounts, the changes in those accounts, and their balances.

A chart of accounts and a ledger are similar in that they both list the account names and account numbers of the business. A ledger, though, provides more detail. It includes the increases and decreases of each account for a specific period and the balance of each account at a specific point in time.



Worldwide, accounting systems are based on the same equation:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$
 Or, in Spanish: Activos = Pasivos + Patrimonio Neto.
 And accounts are the building blocks for all accounting systems.

Ledger

The record holding all the accounts of a business, the changes in those accounts, and their balances.

What are the similarities and differences between a chart of accounts and a ledger?



Try It!

Consider the following accounts and identify each as an asset (A), liability (L), or equity (E).

- | | |
|----------------------|-----------------------|
| 1. Rent Expense | 6. Accounts Payable |
| 2. Brock, Capital | 7. Unearned Revenue |
| 3. Furniture | 8. Notes Receivable |
| 4. Service Revenue | 9. Brock, Withdrawals |
| 5. Prepaid Insurance | 10. Insurance Expense |

Check your answers online in MyAccountingLab or at <http://www.pearsonglobaleditions.com/Horngren>.

For more practice, see Short Exercise S2-1. **MyAccountingLab**

WHAT IS DOUBLE-ENTRY ACCOUNTING?

Learning Objective 2

Define debits, credits, and normal account balances using double-entry accounting and T-accounts

Double-Entry System

A system of accounting in which every transaction affects at least two accounts.

T-Account

A summary device that is shaped like a capital *T* with debits posted on the left side of the vertical line and credits on the right side of the vertical line.

Debit
The left side of a T-account.

Credit
The right side of a T-account.

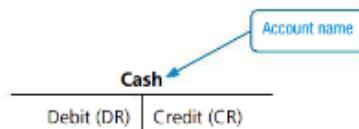
Previously you learned that every transaction must be recorded into at least two accounts. For example, when an owner contributes money in exchange for capital, the two accounts involved are Cash and Owner, Capital. Accounting uses this **double-entry system** to record the dual effects of each transaction. A transaction would be incomplete if only one side were recorded.

Consider a cash purchase of office supplies. What are the dual effects? A cash purchase of office supplies:

1. Increases the account Office Supplies (the business received office supplies).
2. Decreases Cash (the business paid cash).

The T-Account

A shortened form of the ledger is called the **T-account** because it takes the form of the capital letter *T*. The vertical line divides the account into its left and right sides, with the account name at the top. For example, the Cash T-account appears as follows:



The left side of the T-account is called the **debit** side, and the right side is called the **credit** side. To become comfortable using these terms, remember the following: Debits go on the left; credits go on the right. Debit is abbreviated as DR, and Credit is abbreviated as CR.

Increases and Decreases in the Accounts

How we record increases and decreases to an account is determined by the account type (asset, liability, or equity). For any given account, increases are recorded on one side and decreases are recorded on the opposite side. The following T-accounts provide a summary:

ASSETS		=	LIABILITIES		+	EQUITY	
↑	↓		↓	↑		↓	↑
Debit	Credit		Credit	Debit		Debit	Credit

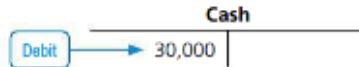
In other words, assets are always increased with a *debit* and decreased with a *credit*. Liabilities and equity are always increased with a *credit* and decreased with a *debit*. Whether an account is increased or decreased by a debit or a credit depends on the type of account. Debits are not “good” or “bad.” Neither are credits. Debits are not always increases or always decreases—neither are credits. **The only thing a designation as a debit or credit means is where the item is placed—on the left or right side of the T-account.**

In a computerized accounting information system, the computer interprets debits and credits as increases or decreases, based on the account type. For example, a computer reads a debit to Cash as an increase because it is an asset account. The computer reads a debit to Accounts Payable as a decrease because it is a liability account.



I always thought
that a debit
meant decrease
and a credit
meant increase.
Am I wrong?

Example: Assume a business wants to record an increase of \$30,000 to the Cash account. The business would record a debit to Cash as follows:



Cash is an asset account and, remember, asset accounts are increased with debits.

Example: What if the business, instead, wanted to record a decrease of \$20,000 to the Cash account? The business would record a credit to Cash because Cash is an asset account and asset accounts are decreased with credits:



Expanding the Rules of Debit and Credit

As we have noted, equity contains four account types: Owner, Capital; Owner, Withdrawals; Revenues; and Expenses. Owner, Capital and Revenues increase equity, whereas Owner, Withdrawals and Expenses decrease equity. We must now expand the accounting equation and the rules of debits and credits to include all elements of equity:

EQUITY																
ASSETS		=	LIABILITIES		+	Owner, Capital		-	Owner, Withdrawals		+	Revenues		-	Expenses	
↑	↓		↓	↑		↓	↑		↑	↓		↓	↑		↑	↓
Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit

Notice in the expanded accounting equation that Owner, Withdrawals and Expenses record increases and decreases opposite of Owner, Capital and Revenues. This is because increases in Owner, Withdrawals and Expenses decrease equity.

The Normal Balance of an Account

All accounts have a normal balance. An account's **normal balance** appears on the side—either debit or credit—where we record an *increase* (↑) in the account's balance. For example, assets are increased with a debit, so the normal balance is a debit. Liabilities and equity are increased with a credit, so the normal balance is a credit. Expenses and Owner, Withdrawals are equity accounts that have normal debit balances—unlike the other equity accounts. They have debit balances because they decrease equity. Owner, Capital and Revenues have a normal balance of credit. Let's look again at the accounting equation, this time with the normal balances marked:

EQUITY																
ASSETS		=	LIABILITIES		+	Owner, Capital		-	Owner, Withdrawals		+	Revenues		-	Expenses	
↑	↓		↓	↑		↓	↑		↑	↓		↓	↑		↑	↓
Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit		Debit	Credit
Normal Balance			Normal Balance			Normal Balance			Normal Balance			Normal Balance			Normal Balance	

Normal Balance

The balance that appears on the increase side of an account.

An account with a normal debit balance may occasionally have a credit balance. That indicates a negative amount in the account. For example, Cash will have a credit balance if the business overdraws its bank account. Also, the liability, Accounts Payable—a normal credit balance account—could have a debit balance if the company overpays its accounts payable. In other cases, a non-normal account balance indicates an error. For example, a credit balance in Office Supplies, Furniture, or Buildings is an error because negative amounts of these assets make no sense.

Exhibit 2-5 summarizes the rules of debit and credit and the normal balances for each account type.

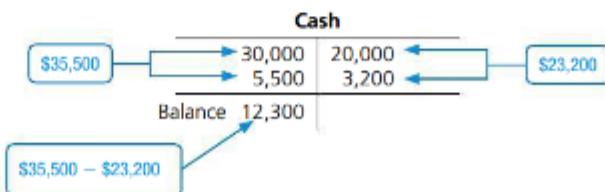
Exhibit 2-5 | Rules of Debit and Credit and Normal Balances for Each Account Type

Account Type	Increases	Decreases	Normal Balance
Assets	Debit	Credit	Debit
Expenses	Debit	Credit	Debit
Owner, Withdrawals	Debit	Credit	Debit
Liabilities	Credit	Debit	Credit
Revenues	Credit	Debit	Credit
Owner, Capital	Credit	Debit	Credit

An easy way to remember the rules of debits and credits is to memorize this helpful sentence. *All elephants will love rowdy children.* The first three words in the sentence will help you remember that assets, expenses, and withdrawals all have normal debit balances. The last three words in the sentence will remind you that liabilities, revenues, and capital all have normal credit balances.

Determining the Balance of a T-Account

T-accounts can be used to determine the amount remaining in an account or the *balance* of the account. To illustrate, let's look at the following Cash T-Account



The balance of this Cash account is \$12,300. This is calculated by adding each side of the account separately (\$35,500 and \$23,200) and then subtracting the smaller number from the larger number ($\$35,500 - \$23,200$). The balance (\$12,300) is always reported on the side with the larger number.



Try It!

For each account, identify if the change would be recorded as a debit (DR) or credit (CR).

- | | |
|-------------------------------------|----------------------------------|
| 11. Increase to Cash | 16. Increase to Interest Revenue |
| 12. Decrease to Accounts Payable | 17. Increase to Rent Expense |
| 13. Increase to Owner, Capital | 18. Decrease to Office Supplies |
| 14. Increase to Unearned Revenue | 19. Increase to Prepaid Rent |
| 15. Decrease to Accounts Receivable | 20. Increase to Notes Payable |

Check your answers online in MyAccountingLab or at <http://www.pearsonglobaleditions.com/Horngren>.

For more practice, see Short Exercises 52-2 and 52-3. **MyAccountingLab**

HOW DO YOU RECORD TRANSACTIONS?

When we reviewed the activity for Smart Touch Learning, we provided you with the transactions. In a real-world business, because of the faithful representation concept, accountants would need to provide evidence for those transactions.

Source Documents—The Origin of the Transactions

Accountants use **source documents** to provide the evidence and data for recording transactions. For example, consider Sheena Bright's contribution of \$30,000 to the business. Exhibit 2-6 illustrates the transaction. In that exhibit, Smart Touch Learning received \$30,000 and deposited it in the bank. The business then gave capital to Sheena Bright. The check received and the bank deposit slip are the source documents that show the amount of cash received by the business and the equity contribution of the owner, Sheena Bright. Based on these documents, the business can determine how to record this transaction.

Learning Objective 3

Record transactions in a journal and post journal entries to the ledger

Source Document

Provides the evidence and data for accounting transactions.

Exhibit 2-6 | Flow of Accounting Data





ETHICS

Are receipts really important?

Elijah Morris, assistant manager for Red's American Burger Restaurant, is responsible for purchasing equipment and supplies for the restaurant. Elijah recently purchased a \$4,000 commercial-grade refrigerator for the restaurant, but he can't find the receipt. Elijah purchased the refrigerator with personal funds and is asking to be reimbursed by the restaurant. Hannah, the restaurant's accountant, has said that she is unsure if the business can reimburse Elijah without a receipt. Elijah suggests: "Hannah, it won't really matter if I have a receipt or not. You've seen the refrigerator in the restaurant, so you know I purchased it. What difference is a little receipt going to make?"

What should Hannah do? What would you do?

Solution

Hannah should not reimburse Elijah until she receives the receipt—the source document. Elijah could have purchased the refrigerator for less than the amount he is asking in reimbursement. Source documents provide the evidence of the amount of the transaction. If either an auditor or the owner of the restaurant investigated the \$4,000 purchase, he or she would need to see the source document to verify the transaction. If Elijah truly cannot find the receipt, Hannah should ask for an alternative source document such as a credit card or bank statement that shows evidence of the purchase. In addition, Elijah should be warned about using personal funds to purchase equipment for the business.

Other source documents that businesses use include the following:

- **Purchase invoices.** Documents that tell the business how much and when to pay a vendor for purchases on account, such as office supplies.
- **Bank checks.** Documents that illustrate the amount and date of cash payments.
- **Sales invoices.** Documents provided to clients when a business sells services or goods; tells the business how much revenue to record.

Journalizing and Posting Transactions

After accountants review the source documents, they are then ready to record the transactions. Transactions are first recorded in a **journal**, which is the record of transactions in date order.

Journalizing a transaction records the data only in the journal—not in the ledger (the record holding all of the accounts of a business). The data must also be transferred to the ledger. The process of transferring data from the journal to the ledger is called **posting**. We post from the journal to the ledger. Debits in the journal are posted as debits in the ledger and credits as credits—no exceptions.

The following diagram shows this process:

Date		Debit	Credit
Nov. 1	Cash Bright, Capital Owner contribution.	30,000	30,000

Transactions are recorded in a journal.

Cash		Bright, Capital	
30,000			30,000

Data is posted (transferred) to the ledger.

You have learned steps to use when analyzing accounting transactions. Use a modified version of those steps to help when recording transactions in the journal and then posting the journal entries to the ledger. The journalizing and posting process has five steps:

Step 1: Identify the accounts and the account type (asset, liability, or equity).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits.

Step 3: Record the transaction in the journal.

Step 4: Post the journal entry to the ledger.

Step 5: Determine whether the accounting equation is in balance.

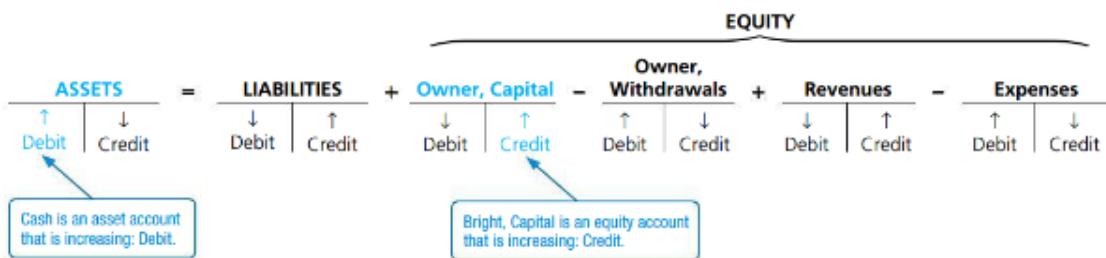
Let's begin by journalizing the first transaction of Smart Touch Learning.

Transaction 1—Owner Contribution

On November 1, the e-learning company received \$30,000 cash from Sheena Bright and the business issued capital to her.

Step 1: Identify the accounts and the account type. The two accounts involved are Cash (Asset) and Bright, Capital (Equity).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits. Both accounts increase by \$30,000. Reviewing the rules of debits and credits, we use the accounting equation to help determine debits and credits for each account. Cash is an asset account and is increasing, so we will record a debit to Cash. Bright, Capital is an equity account and is increasing, so we will record a credit to Bright, Capital.



Step 3: Record the transaction in the journal. The recording of a transaction in the journal creates a journal entry. The journal entry for Transaction 1 is illustrated below. Notice that each journal entry contains four parts.

Journal Entry:

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Cash Bright, Capital Owner contribution.	30,000	30,000

Annotations:

1. Date of the transaction.
2. Debit account name and dollar amount.
3. Credit account name and dollar amount. The credit account name is indented.
4. Brief explanation.

Explanation:

$$\frac{\text{A}\uparrow}{\text{Cash}\uparrow} = \left\{ \begin{array}{l} \text{L} \\ \text{+ E}\uparrow \\ \text{Bright, Capital}\uparrow \end{array} \right\}$$

Step 4: Post the journal entry to the ledger. When transactions are posted from the journal to the ledger, the dollar amount is transferred from the debit and credit columns to the specific account. The date of the journal entry is also transferred to the T-accounts in the ledger. In a computerized system, this step is completed automatically when the transaction is recorded in the journal.

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Cash Bright, Capital Owner contribution,	30,000	30,000

Cash	Bright, Capital
Nov. 1 30,000	30,000 Nov. 1

Step 5: Determine if the accounting equation is in balance.

$$\begin{array}{c} \text{ASSETS} \\ \text{Cash} \\ (1) + 30,000 \end{array} = \left\{ \begin{array}{l} \text{LIABILITIES} + \text{EQUITY} \\ \text{Bright,} \\ \text{Capital} \\ + 30,000 \end{array} \right\}$$

To help reinforce your learning of the account types, we will illustrate the transaction in the margin. We will indicate the accounts and account type (Step 1) and whether each account is increasing or decreasing (Step 2). These notations would not normally show up in a journal, but we have included them here to reinforce the rules of debits and credits.

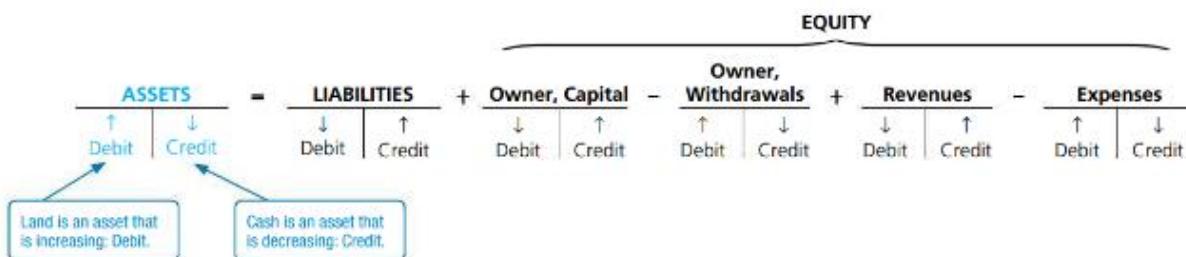
Let's look at Transaction 2 for Smart Touch Learning and apply the steps we just learned.

Transaction 2—Purchase of Land for Cash

On November 2, Smart Touch Learning paid \$20,000 cash for land.

Step 1: Identify the accounts and the account type. The two accounts involved are Cash (Asset) and Land (Asset).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits. Cash decreases. The business paid cash. Therefore, we credit Cash. The land increased, so we debit the Land account.



Step 3: Record the transaction in the journal.

Date	Accounts and Explanation	Debit	Credit
Nov. 2	Land Cash <i>Paid cash for land.</i>	20,000	20,000

$$\left. \begin{array}{l} A \uparrow \\ \text{Land} \uparrow \\ \text{Cash} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \\ + \\ E \end{array} \right.$$

Step 4: Post the journal entry to the ledger.

Cash			Land	
Nov. 1	30,000	20,000	Nov. 2	20,000

Step 5: Determine whether the accounting equation is in balance.

ASSETS		=	LIABILITIES	+	EQUITY
Cash	+ Land				Bright, Capital
Bal. \$30,000					\$30,000
(2) -20,000	+20,000				
Bal. \$10,000	+ \$20,000				\$30,000

We will now record journal entries for several more transactions for Smart Touch Learning. Now that you understand the steps, try to write the steps yourself before looking at the journal entry. Remember, if you need help, we'll provide the effect on the accounting equation in the margin.

Transaction 3—Purchase of Office Supplies on Account

Smart Touch Learning buys \$500 of office supplies on account on November 3.

The supplies will benefit Smart Touch Learning in future periods, so they are an asset to the company until they are used. The asset Office Supplies increased, so we debit Office Supplies. The liability Accounts Payable increased, so we credit Accounts Payable.

Date	Accounts and Explanation	Debit	Credit
Nov. 3	Office Supplies Accounts Payable <i>Purchased office supplies on account.</i>	500	500

$$\left. \begin{array}{l} A \uparrow \\ \text{Office} \\ \text{Supplies} \uparrow \end{array} \right\} = \left\{ \begin{array}{l} L \uparrow \\ + \\ \text{Accounts} \\ \text{Payable} \uparrow \end{array} \right.$$

Office Supplies		Accounts Payable	
Nov. 3	500	500	Nov. 3

Transaction 4—Earning of Service Revenue for Cash

On November 8, Smart Touch Learning collected cash of \$5,500 for service revenue that the business earned by providing e-learning services for clients.

The asset Cash increased, so we debit Cash. Revenue increased, so we credit Service Revenue.

$$\begin{array}{c} \text{A} \\ \text{Cash} \\ \uparrow \end{array} = \left\{ \begin{array}{c} \text{L} \\ + \\ \text{E} \\ \text{Service} \\ \text{Revenue} \\ \uparrow \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Nov. 8	Cash		5,500	
	Service Revenue			5,500
Performed services and received cash.				

Cash			Service Revenue	
Nov. 1	30,000	20,000	Nov. 2	
Nov. 8		5,500		5,500 Nov. 8

Transaction 5—Earning of Service Revenue on Account

On November 10, Smart Touch Learning performed services for clients, for which the clients will pay the company later. The business earned \$3,000 of service revenue on account.

This transaction increased Accounts Receivable, so we debit this asset. Service Revenue is increased with a credit.

$$\begin{array}{c} \text{A} \\ \text{Accounts} \\ \text{Receivable} \\ \uparrow \end{array} = \left\{ \begin{array}{c} \text{L} \\ + \\ \text{E} \\ \text{Service} \\ \text{Revenue} \\ \uparrow \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Nov. 10	Accounts Receivable		3,000	
	Service Revenue			3,000
Performed services on account.				

Accounts Receivable		Service Revenue	
Nov. 10	3,000	5,500	Nov. 8
		3,000	Nov. 10

Notice the differences and the similarities between Transactions 4 and 5. In both transactions, Service Revenue was increased (credited) because in both cases the company had earned revenue. However, in Transaction 4, the company was paid at the time of service. In Transaction 5, on the other hand, the company will receive cash later (Accounts Receivable). This difference is key because the amount of revenue is not determined by when the company *receives* cash. Revenues are recorded when the company *does* the work or provides the service.

Transaction 6—Payment of Expenses with Cash

Smart Touch Learning paid the following cash expenses on November 15: office rent, \$2,000, and employee salaries, \$1,200. We need to debit each expense account to record its increase and credit Cash, an asset, for the total decrease.

Date	Accounts and Explanation	Debit	Credit
Nov. 15	Rent Expense	2,000	
	Salaries Expense	1,200	
	Cash		3,200
	Paid cash expenses.		

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} \underline{L} + \underline{E} \downarrow \\ \text{Rent} \\ \text{Expense} \\ \text{Salaries} \\ \text{Expense} \end{array} \right\}$$

Cash				Rent Expense	
Nov. 1	30,000	20,000	Nov. 2	Nov. 15	2,000
Nov. 8	5,500	3,200	Nov. 15		

Salaries Expense		
Nov. 15	1,200	

Notice that the journal entry has three accounts involved—two debits and one credit. This is a compound journal entry. A **compound journal entry** has more than two accounts, but the total dollar value of the debits still must equal the total dollar value of the credits.

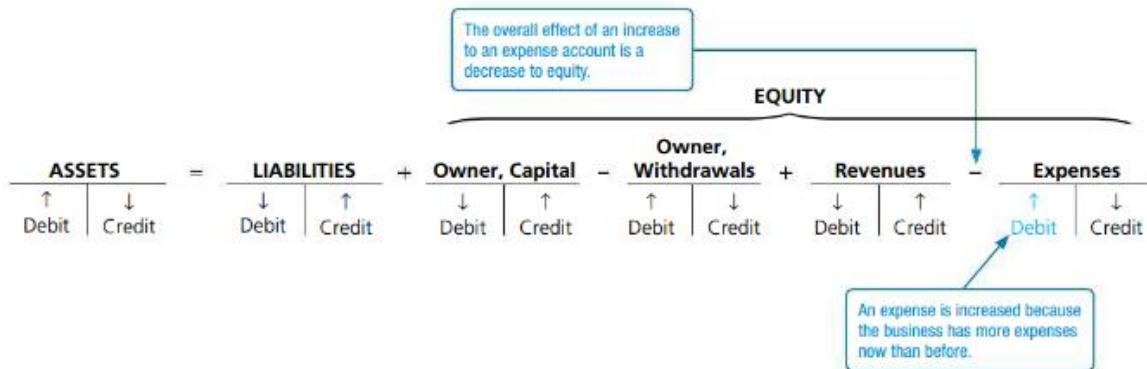
Before we move to the next transaction, let's take a moment to carefully look at expenses. In Transaction 6, we recorded a debit to each expense account. The accounting equation and the rules of debits and credits state that a debit to an expense account increases the account.

We are recording an increase to the expense account because the business has more expenses now than it had before. But, remember, the overall effect on the accounting equation is that increases in expenses decrease equity. An easy way to think about it is that we are increasing a negative account.

Compound Journal Entry

A journal entry that is characterized by having multiple debits and/or multiple credits.

I thought expenses decreased equity, but we are debiting the expense that records an increase to the account.





Transaction 7—Payment on Account (Accounts Payable)

On November 21, Smart Touch Learning paid \$300 on the accounts payable created in Transaction 3. The payment decreased cash, an asset, so we credit Cash. The payment decreased Accounts Payable, so we debit that liability.

$$\begin{array}{c} \text{A}\downarrow \\ \text{Cash}\downarrow \\ \end{array} = \left\{ \begin{array}{c} \text{L}\downarrow + \text{E} \\ \text{Accounts} \\ \text{Payable}\downarrow \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Nov. 21	Accounts Payable Cash <i>Paid cash on account.</i>		300	300

Cash			Accounts Payable		
Nov. 1	30,000	20,000	Nov. 2	Nov. 21	300 500 Nov. 3
Nov. 8	5,500	3,200	Nov. 15		
		300	Nov. 21		

Notice that after recording this transaction and posting to the Accounts Payable account, the balance of Accounts Payable is \$200 (\$500 – \$300). This is the new balance that the business owes to its creditor.

Transaction 8—Collection on Account (Accounts Receivable)

On November 22, Smart Touch Learning collected \$2,000 cash from a client in Transaction 5. Cash is increased, so we debit the asset Cash. Accounts Receivable, also an asset, is decreased, so we credit Accounts Receivable. *Note:* This transaction has no effect on revenue; the related revenue was recorded in Transaction 5.

$$\begin{array}{c} \text{A}\uparrow \\ \text{Cash}\uparrow \\ \text{Accounts} \\ \text{Receivable}\downarrow \\ \end{array} = \left\{ \begin{array}{c} \text{L} + \text{E} \\ \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Nov. 22	Cash Accounts Receivable <i>Received cash on account.</i>		2,000	2,000

Cash			Accounts Receivable		
Nov. 1	30,000	20,000	Nov. 2	Nov. 10	3,000 2,000 Nov. 22
Nov. 8	5,500	3,200	Nov. 15		
Nov. 22	2,000	300	Nov. 21		

Transaction 9—Owner Withdrawal of Cash

On November 25, Sheena Bright withdrew cash of \$5,000. The withdrawal decreased the entity's cash, so we credit Cash. The withdrawal also decreased equity. Decreases in equity that result from withdrawals are debited to the owner's withdrawal account, so we debit Bright, Withdrawals.

Date	Accounts and Explanation	Debit	Credit
Nov. 25	Bright, Withdrawals Cash Owner withdrawal.	5,000	5,000

$$\frac{A\downarrow}{\text{Cash}\downarrow} = \left\{ \begin{array}{l} \underline{L} + \underline{E\downarrow} \\ \text{Bright,} \\ \text{Withdrawals}\uparrow \end{array} \right.$$

Cash				Bright, Withdrawals	
Nov. 1	30,000	20,000	Nov. 2	Nov. 25	5,000
Nov. 8	5,500	3,200	Nov. 15		
Nov. 22	2,000	300	Nov. 21		
		5,000	Nov. 25		

Transaction 10—Prepaid Expenses

On December 1, Smart Touch Learning prepays three months' office rent of \$3,000 (\$1,000 per month \times 3 months). The prepayment of the rent is recorded to the Prepaid Rent account (Asset). It is recorded as an asset because Smart Touch Learning will receive a benefit in the future. The asset, Prepaid Rent, is increasing, so we will need to debit it. Cash is decreasing and will be recorded as a credit.

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Prepaid Rent Cash Paid rent in advance.	3,000	3,000

$$\frac{A\uparrow}{\text{Prepaid} \\ \text{Rent}\uparrow \\ \text{Cash}\downarrow} = \left\{ \underline{L} + \underline{E} \right.$$

Cash				Prepaid Rent	
Nov. 1	30,000	20,000	Nov. 2	Dec. 1	3,000
Nov. 8	5,500	3,200	Nov. 15		
Nov. 22	2,000	300	Nov. 21		
		5,000	Nov. 25		
		3,000	Dec. 1		

Transaction 11—Payment of Expense with Cash

On December 1, Smart Touch Learning paid employee salaries of \$1,200. Salaries Expense will be debited to record its increase, and Cash will be credited for the decrease.

$$\begin{array}{c} \text{A}\downarrow \\ \text{Cash}\downarrow \end{array} = \left\{ \begin{array}{c} \text{L} \\ \text{Salaries} \\ \text{Expense}\uparrow \end{array} + \begin{array}{c} \text{E}\downarrow \\ \text{Salaries} \\ \text{Expense}\uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Salaries Expense Cash <i>Paid salaries.</i>	1,200	1,200

Cash				Salaries Expense	
Nov. 1	30,000	20,000	Nov. 2	Nov. 15	1,200
Nov. 8	5,500	3,200	Nov. 15	Dec. 1	1,200
Nov. 22	2,000	300	Nov. 21		
		5,000	Nov. 25		
		3,000	Dec. 1		
		1,200	Dec. 1		

Transaction 12—Purchase of Building with Notes Payable

On December 1, Smart Touch Learning purchased a \$60,000 building in exchange for a note payable. The building will benefit the business in the future, so it is recorded as an asset to the company. The asset Building is increased, so we debit Building. The liability Notes Payable increased, so we credit Notes Payable.

$$\begin{array}{c} \text{A}\uparrow \\ \text{Building}\uparrow \end{array} = \left\{ \begin{array}{c} \text{L}\uparrow \\ \text{Notes} \\ \text{Payable}\uparrow \end{array} + \begin{array}{c} \text{E} \\ \text{Notes} \\ \text{Payable}\uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Building Notes Payable <i>Purchase of building with note.</i>	60,000	60,000

Building		Notes Payable	
Dec. 1	60,000		60,000 Dec. 1

Transaction 13—Owner Contribution

On December 2, Smart Touch Learning received a contribution of furniture with a fair market value of \$18,000 from Sheena Bright. In exchange, Smart Touch Learning issued capital. The furniture will benefit the company in the future, so it is recorded as an asset. The asset Furniture is increasing, so we debit it. Bright, Capital, an equity account, is also increasing and is recorded as a credit.

Date	Accounts and Explanation	Debit	Credit
Dec. 2	Furniture Bright, Capital <i>Owner contribution of furniture.</i>	18,000	18,000

$$\text{Furniture} \uparrow = \boxed{\text{L}} + \boxed{\text{E} \uparrow}$$

Bright,
Capital \uparrow

Furniture		Bright, Capital	
Dec. 2	18,000	30,000 Nov. 1	18,000 Dec. 2

Transaction 14—Accrued Liability

On December 15, Smart Touch Learning received a telephone bill for \$100 and will pay this expense next month. There is no cash payment now. This is an accrued liability. Remember, an accrued liability is a liability for which the business knows the amount owed, but the bill has not been paid. The Utilities Expense increased, so we debit this expense. The liability (Utilities Payable) increased, so we credit Utilities Payable. Alternatively, we could credit Accounts Payable instead of Utilities Payable.

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Utilities Expense Utilities Payable <i>Accrued utility liability.</i>	100	100

$$\text{A} = \boxed{\text{L} \uparrow} + \boxed{\text{E} \downarrow}$$

Utilities
Payable \uparrow Utilities
Expense \uparrow

Utilities Payable		Utilities Expense	
100	Dec. 15	Dec. 15	100

Transaction 15—Payment of Expense with Cash

On December 15, Smart Touch Learning paid employee salaries of \$1,200. Salaries Expense will be debited to record its increase, and Cash will be credited for the decrease.

$$\begin{array}{c} \text{A} \\ \text{Cash} \\ \downarrow \end{array} = \left\{ \begin{array}{c} \text{L} \\ + \text{E} \\ \text{Salaries} \\ \text{Expense} \\ \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Salaries Expense Cash <i>Paid salaries.</i>	1,200	1,200

Cash				Salaries Expense	
Nov. 1	30,000	20,000	Nov. 2	Nov. 15	1,200
Nov. 8	5,500	3,200	Nov. 15	Dec. 1	1,200
Nov. 22	2,000	300	Nov. 21	Dec. 15	1,200
		5,000	Nov. 25		
		3,000	Dec. 1		
		1,200	Dec. 1		
		1,200	Dec. 15		

Transaction 16—Unearned Revenue

On December 21, a law firm engages Smart Touch Learning to provide e-learning services and agrees to pay \$600 in advance. Smart Touch Learning received cash but has not yet performed the services. Cash increased, so we debit Cash. The promise to perform services in the future will be recorded as Unearned Revenue, a liability account. Unearned Revenue is increasing, so we credit it. Notice that we did not record revenue. Revenue is not recorded until Smart Touch Learning provides the services.

$$\begin{array}{c} \text{A} \\ \text{Cash} \\ \uparrow \end{array} = \left\{ \begin{array}{c} \text{L} \\ + \text{E} \\ \text{Unearned} \\ \text{Revenue} \\ \uparrow \end{array} \right.$$

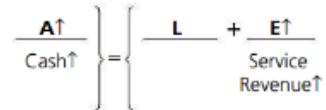
Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash Unearned Revenue <i>Collected cash for future services.</i>	600	600

Cash				Unearned Revenue	
Nov. 1	30,000	20,000	Nov. 2		
Nov. 8	5,500	3,200	Nov. 15		
Nov. 22	2,000	300	Nov. 21		
Dec. 21	600	5,000	Nov. 25		
		3,000	Dec. 1		
		1,200	Dec. 1		
		1,200	Dec. 15		

Transaction 17—Earning of Service Revenue for Cash

On December 28, Smart Touch Learning collected cash of \$8,000 for Service Revenue that the business earned by providing e-learning services for clients.

Date	Accounts and Explanation	Debit	Credit
Dec. 28	Cash Service Revenue <i>Performed services and received cash.</i>	8,000	8,000



Cash				Service Revenue	
Nov. 1	30,000	20,000	Nov. 2	5,500	Nov. 8
Nov. 8	5,500	3,200	Nov. 15	3,000	Nov. 10
Nov. 22	2,000	300	Nov. 21	8,000	Dec. 28
Dec. 21	600	5,000	Nov. 25		
Dec. 28	8,000	3,000	Dec. 1		
		1,200	Dec. 1		
		1,200	Dec. 15		

The Ledger Accounts After Posting

Exhibit 2-7 (on the next page) shows the T-accounts of Smart Touch Learning after posting the journal entries from the journal to the ledger. The accounts are grouped under their headings. Notice that at December 31, Smart Touch Learning has assets of \$114,700 ($\$12,200 + \$1,000 + \$500 + \$3,000 + \$18,000 + \$60,000 + \$20,000$), liabilities of \$60,900 ($\$200 + \$100 + \$600 + \$60,000$), and equity of \$53,800 ($\$48,000 - \$5,000 + \$16,500 - \$2,000 - \$3,600 - \100). The accounting equation is in balance ($\$114,700 = \$60,900 + \$53,800$).

The Four-Column Account: An Alternative to the T-Account

The ledger accounts illustrated thus far appear as T-accounts, with the debits on the left and the credits on the right. The T-account clearly separates debits from credits and is used for teaching. An alternative to using the T-account is the four-column account. The four-column account still has debit and credit columns, but it also adds two additional columns that are used to determine a running balance. **Exhibit 2-8** shows the Cash T-account and the Cash four-column account for Smart Touch Learning.

The first pair of Debit/Credit columns in the four-column account is for transaction amounts posted to the account from the journal, such as the \$30,000 debit. The second pair of Debit/Credit columns shows the balance of the account as of each date. Because the four-column format provides more information, it is used more often in practice than the T-account. Notice that the balance after the last transaction on December 28 is \$12,200, which is the same balance calculated in the T-account.

Do you notice the column labeled *Post Ref.* in the four-column account in **Exhibit 2-8**? This column is used in the posting process. When the information is transferred from the journal to the ledger, a posting reference (*Post Ref.*) is added. This allows a user of the financial data to trace the amount in the ledger back to the journal. In a computerized system, the user would be able to click on the posting reference to view the

Exhibit 2-8 | T-Account Versus Four-Column Account

Cash						
Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
Nov. 1	30,000		20,000	Nov. 2		
Nov. 8	5,500		3,200	Nov. 15		
Nov. 22	2,000		300	Nov. 21		
Dec. 21	600		5,000	Nov. 25		
Dec. 28	8,000		3,000	Dec. 1		
			1,200	Dec. 1		
			1,200	Dec. 15		
Bal.	12,200					

The Debit or Credit for each transaction.

The balance of the account after each transaction.

CASH			Account No. 101			
Date	Item	Post Ref.	Debit	Credit	Debit	Credit
2016						
Nov. 1		J1	30,000		30,000	
Nov. 2		J1		20,000	10,000	
Nov. 8		J1	5,500		15,500	
Nov. 15		J1		3,200	12,300	
Nov. 21		J1		300	12,000	
Nov. 22		J1	2,000		14,000	
Nov. 25		J1		5,000	9,000	
Dec. 1		J2		3,000	6,000	
Dec. 1		J2		1,200	4,800	
Dec. 15		J2		1,200	3,600	
Dec. 21		J2	600		4,200	
Dec. 28		J2	8,000		12,200	

related journal entry. Exhibit 2-9 shows the posting and associated posting references for Transaction 1 of Smart Touch Learning. Remember, in a computerized environment, this process is completed automatically when the user enters the journal entry.

Exhibit 2-9 | Posting References

The diagram illustrates the posting process. A blue arrow points from the 'Post. Ref.' column of the journal to the 'Post. Ref.' column of the ledger accounts. Another blue arrow points from the 'Debit' and 'Credit' columns of the journal to the corresponding 'Debit' and 'Credit' columns of the ledger accounts. A callout box labeled 'The page number from the journal.' points to the 'Page 1' label above the journal. A callout box labeled 'The account number from the ledger.' points to the 'Account No. 101' and 'Account No. 301' labels above their respective ledger accounts.

Date	Accounts and Explanation			Post. Ref.	Debit	Credit
Nov. 1	Cash Bright, Capital Owner contribution.			101 301	30,000	30,000

CASH						
Date	Item	Post. Ref.	Debit	Credit	Balance	
					Debit	Credit
2016						
Nov. 1		J1	30,000			30,000

BRIGHT, CAPITAL						
Date	Item	Post. Ref.	Debit	Credit	Balance	
					Debit	Credit
2016						
Nov. 1		J1		30,000		30,000

Try It!

21. EMB Consulting Services had the following transactions for the month of November. Journalize the transactions and include an explanation with each entry.

- Nov. 1 The business received \$10,000 cash and gave capital to Eloise Martinez, the owner.
- 15 Purchased office supplies on account, \$400.
- 18 Paid advertising bill, \$150.
- 20 Received \$1,000 from customers for services rendered.
- 28 Martinez withdrew \$500 from the business.

Check your answers online in MyAccountingLab or at <http://www.pearsonglobaleditions.com/Horngren>.

For more practice, see Short Exercises S2-4 through S2-7. **MyAccountingLab**

WHAT IS THE TRIAL BALANCE?

After the transactions are recorded in the journal and then posted to the ledger, a **trial balance** can be prepared. The trial balance summarizes the ledger by listing all the accounts with their balances—assets first, followed by liabilities, and then equity. In a manual accounting system, the trial balance provides an accuracy check by showing whether total debits equal total credits. In all types of systems, the trial balance is a useful summary of the accounts and their balances because it shows the balances on a specific date for all accounts in a company's accounting system. Exhibit 2-10 is the trial balance of Smart Touch Learning at December 31, 2016.

Learning Objective 4

Prepare the trial balance and illustrate how to use the trial balance to prepare financial statements

Trial Balance

A list of all ledger accounts with their balances at a point in time.

Exhibit 2-10 | Trial Balance

SMART TOUCH LEARNING Trial Balance December 31, 2016		
Account Title	Balance	
	Debit	Credit
Cash	\$ 12,200	
Accounts Receivable	1,000	
Office Supplies	500	
Prepaid Rent	3,000	
Furniture	18,000	
Building	60,000	
Land	20,000	
Accounts Payable		\$ 200
Utilities Payable		100
Unearned Revenue		600
Notes Payable		60,000
Bright, Capital		48,000
Bright, Withdrawals	5,000	
Service Revenue		16,500
Rent Expense	2,000	
Salaries Expense	3,600	
Utilities Expense	100	
Total	\$ 125,400	\$ 125,400

The trial balance and the balance sheet are not the same. Make sure you understand the differences between these two documents. A trial balance verifies the equality of debits and credits and is an internal document used only by employees of the company. The balance sheet, on the other hand, presents the business's accounting equation and is a financial statement that can be used by both internal and external users.

Preparing Financial Statements from the Trial Balance

In addition to proving the equality of debits and credits, the trial balance is also used to prepare the financial statements. The account balances are taken directly from the trial balance and are used to prepare the income statement, statement of owner's equity, and balance sheet. In Exhibit 2-11 (on the next page), we present the financial statements for the two months ended December 31, 2016, for Smart Touch Learning.

Exhibit 2-11 | Smart Touch Learning's Financial Statements

The diagram illustrates the flow of financial information from the Income Statement to the Statement of Owner's Equity and finally to the Balance Sheet.

SMART TOUCH LEARNING Income Statement Two Months Ended December 31, 2016		
Revenues:		
Service Revenue	\$ 16,500	
Expenses:		
Salaries Expense	\$ 3,600	
Rent Expense	2,000	
Utilities Expense	100	
	<u>5,700</u>	
Net Income	<u><u>\$ 10,800</u></u>	

SMART TOUCH LEARNING Statement of Owner's Equity Two Months Ended December 31, 2016		
Bright, Capital, November 1, 2016	\$ 0	
Owner contribution	48,000	
→ Net income for the two months	10,800	
	<u>58,800</u>	
Owner withdrawal	(5,000)	
Bright, Capital, December 31, 2016	<u><u>\$ 53,800</u></u>	

SMART TOUCH LEARNING Balance Sheet December 31, 2016			
Assets		Liabilities	
Cash	\$ 12,200	Accounts Payable	\$ 200
Accounts Receivable	1,000	Utilities Payable	100
Office Supplies	500	Unearned Revenue	600
Prepaid Rent	3,000	Notes Payable	<u>60,000</u>
Furniture	18,000	Total Liabilities	60,900
Building	60,000		
Land	20,000		
Total Assets	<u><u>\$ 114,700</u></u>		
Owner's Equity			
Bright, Capital	53,800		
Total Liabilities and Owner's Equity	<u><u>\$ 114,700</u></u>		

Correcting Trial Balance Errors

Throughout the accounting process, total debits should always equal total credits. If they do not, there is an error. Computerized accounting systems eliminate many errors because most software will not let you make a journal entry that does not balance. But computers cannot *eliminate* all errors because humans can input the wrong data.

Balancing errors can be detected by computing the difference between total debits and total credits on the trial balance. Then perform one or more of the following actions:

- 1. Search the trial balance for a missing account.** For example, suppose the accountant omitted the Bright, Withdrawals account from the trial balance in Exhibit 2-10. Total debits would then be \$120,400 ($\$125,400 - \$5,000$). Trace each account from the ledger to the trial balance, and you will locate the missing account.
- 2. Divide the difference between total debits and total credits by 2.** A debit treated as a credit, or vice versa, doubles the amount of the error. Suppose the accountant posted a \$500 credit as a debit. Total debits contain the \$500, and total credits omit the \$500. The out-of-balance amount is \$1,000. Dividing the difference by 2 identifies the \$500

amount of the transaction. Then search the journal or ledger for a \$500 transaction and trace it to the account affected.

3. **Divide the out-of-balance amount by 9.** If the result is evenly divisible by 9, the error may be a *slide* (example: writing \$1,000 as \$100 or writing \$100 as \$1,000) or a *transposition* (example: listing \$1,200 as \$2,100). Suppose, for example, that the accountant entered the \$5,000 Bright, Withdrawals as \$50,000 on the trial balance. This is a slide-type error. Total debits would differ from total credits by \$45,000 ($\$50,000 - \$5,000 = \$45,000$). Dividing \$45,000 by 9 yields \$5,000, the correct amount of the withdrawals. Look for an account in the ledger with a \$5,000 balance until you reach the Bright, Withdrawals account. You have then found the error.

Total debits can equal total credits on the trial balance; however, there still could be errors in individual account balances because an incorrect account might have been selected in an individual journal entry.



Try It!

22. Using the following accounts and their balances, prepare the trial balance for Cooper Furniture Repair as of December 31, 2016. All accounts have normal balances.

Cash	\$ 7,000	Advertising Expense	\$ 1,200
Uncashed Revenue	4,500	Utilities Expense	800
Equipment	10,000	Rent Expense	5,000
Service Revenue	8,000	Accounts Payable	2,300
Cooper, Capital	12,200	Cooper, Withdrawals	3,000

Check your answers online in MyAccountingLab or at <http://www.pearsonglobaleditions.com/Horngren>.

For more practice, see Short Exercise 52-8. **MyAccountingLab**

HOW DO YOU USE THE DEBT RATIO TO EVALUATE BUSINESS PERFORMANCE?

Previously you learned that evaluating a company's return on assets (Net income / Average total assets) can help in determining how well a company is performing. In this chapter, you learn about another tool that can be used when reviewing financial statements. The **debt ratio** shows the proportion of assets financed with debt and is calculated by dividing total liabilities by total assets. It can be used to evaluate a business's ability to pay its debts.

$$\text{Debt ratio} = \text{Total Liabilities} / \text{Total Assets}$$

Think about the accounting equation (Assets = Liabilities + Equity). The equation shows who can claim the assets. The liabilities represent the claims of the creditors, and the equity represents the claims of the owner. Companies that have a high percentage of liabilities are at greater risk of default. If they are unable to pay their creditors as the amounts become due, the creditors have the right to claim the assets. The debt ratio calculates the percentage of assets that are financed with liabilities.

Learning Objective 5

Use the debt ratio to evaluate business performance

Debt Ratio

Shows the proportion of assets financed with debt. $\text{Total Liabilities} / \text{Total Assets}$.

Let's look at **Green Mountain Coffee Roasters, Inc.** and evaluate its ability to pay its debts. On its 2013 balance sheet (located in Appendix A), Green Mountain reported (in thousands) total liabilities of \$1,125,978 ($\$597,063 + \$160,221 + \$76,061 + \$252,867 + \$28,721 + \$11,045$) and total assets of \$3,761,548. The debt ratio for Green Mountain as of September 28, 2013, follows:

$$\begin{aligned}\text{Debt ratio} &= \text{Total liabilities} / \text{Total assets} \\ &= \$1,125,978 / \$3,761,548 = 0.299 = 29.9\%^*\end{aligned}$$

*rounded

A debt ratio of 29.9% means that approximately thirty percent of the assets of Green Mountain are financed with debt. The other 70.1% (100% – 29.9%) are financed by stockholders of the corporation. The debt ratio indicates the risk of a company. The higher the debt ratio, the higher the risk. All liabilities must eventually be paid, and the debt ratio is one indication of the ability of the company to fulfill these obligations.

DECISIONS

Would you purchase equipment with debt?

Jackson Russell works as a district sales manager for a large pharmaceutical sales company. Jackson would like to purchase a new high-tech marketing display that he will be able to use at upcoming medical conferences. The marketing display will allow his customers to access up-to-date information and research statistics on the pharmaceuticals that his company sells by using multiple touch screen computers. He believes that the marketing display will significantly increase the sales revenue of the products he sells. The only problem is that the marketing display will cost \$50,000, and he does not have the cash in his budget to purchase the display. Jackson will need to purchase the display using debt, which will increase the district's debt ratio from 20% to 58%. Jackson is aware that his company closely monitors the district's debt ratio and has a policy that the district must maintain a ratio below 55%. Should Jackson purchase the equipment?

Solution

If the company has a policy that the district's debt ratio must remain below 55%, then Jackson should not purchase the equipment. However, there might be a way to structure the purchase so that the district's debt ratio would stay below 55%. Jackson either needs to incur less debt or increase his total assets. He could do this in several possible ways. One alternative might be for Jackson to pay for part of the display equipment with cash and only finance part of it with debt. Even putting as little as \$10,000 cash down on the equipment would keep the debt ratio below 55%. Another alternative might be for his district to recognize revenue. If there are open sales opportunities that his employees could close, they might be able to increase total assets (and revenue) and, thereby, decrease the debt ratio.



Try It!

23. Using the following accounts and their balances, calculate the debt ratio for Cooper Furniture Repair as of December 31, 2016.

Cash	\$ 7,000	Advertising Expense	\$ 1,200
Unearned Revenue	4,500	Utilities Expense	800
Equipment	10,000	Rent Expense	5,000
Service Revenue	8,000	Accounts Payable	2,300
Miller, Capital	12,200	Miller, Withdrawals	3,000

Check your answers online in MyAccountingLab or at <http://www.pearsonglobaleditions.com/Horngren>.

For more practice, see Short Exercise S2-9. **MyAccountingLab**