



So, you want to learn Bookkeeping!

by Bean Counter's Dave Marshall

Lesson 2

Property and Property Rights

Your chef, namely me (I know I was a lifeguard but now I'm a chef), is about to divulge a secret recipe. I know you've been waiting to get the Colonel's secret recipe for Kentucky fried chicken. Sorry to disappoint you, but this recipe is actually a simple equation and lays the foundation on which double entry bookkeeping is built.



This equation is called **the**

ACCOUNTING EQUATION

and is also referred to as the **Balance Sheet Equation**

The equation may be expressed in three forms:

- Abbreviated or Simple Version:
 $\text{Property} = \text{Property Rights}$
- Expanded Version:
 $\text{Assets} = \text{Liabilities} + \text{Owner's Equity (Capital)}$
- Fully Expanded Version:
 $\text{Assets} = \text{Liabilities} + \text{Beginning Owner's Equity (Capital)} + \text{Additional Owner Investments} + \text{Revenues} - \text{Expenses} - \text{Draws}$

The two basic elements of any organization are what it owns (property) and who it owes (property rights). Remember from Lesson 1 (it wasn't that long ago) that property and assets are both terms that define the same thing and that property rights is an abbreviated term for liabilities and equity. You'll probably notice that I use these terms interchangeably through out the tutorial.

The simple or abbreviated accounting equation ($\text{Property} = \text{Property Rights}$) states that the property of the business must equal the rights to the property or stated another way the claims against the property. In other words, we want to track not only the goodies (property) we get, but also how we acquired or got them and from whom (source).

Double Entry Bookkeeping System

Do you also recall that term **double entry** that we mentioned in the Introduction and also in Lesson 1 ?

Double Entry is a type of accounting/bookkeeping system that requires every transaction to be recorded in at least two places (accounts) using debits and credits (discussed later) to represent increases and decreases.

Well this equation is what **double entry** is all about. We make two entries for every business transaction. These entries represent increases or decreases in property (assets) and/or property rights (liabilities and owner's equity).

In other words the double entry system based on the Accounting Equation allows us to track:

(1) What We Got and What Went (Property)

and

(2) From Whom and To Whom (Property Rights)

Claims To The Assets ("Good Stuff")

Who has a right or claim to the business's property ? Claims to the property (assets) arise from two sources:

- Creditors of the business (liabilities)
Those from whom the business borrows from or buys from on credit are called creditors. The creditors have a claim to the property (assets) of the business until they are paid. These creditor claims are called liabilities. Two common types of creditors are a business's suppliers and banker.
- Owner(s) of the business (owner's equity)
Yes the owner(s) also has a claim to the property (assets) for property (assets) invested into their business and any increases or decreases resulting from operating the business. Remember in Lesson 1 we discussed Owner's Equity ("Ma Capital") and also her four kids Revenue, Investment, Expense, and Draws. If you recall, we learned that revenues and additional owner investments increase owner's equity while expenses and draws decrease owner's equity.

Another way to think about these increases and decreases to equity is to relate it to your personal financial situation. Your earnings (revenue) increase your personal wealth (equity) and your living expenses and draws (money you give your wife) decrease your personal wealth (equity). Sorry gals that I picked on you for my example of draws.

Besides monitoring and keeping up with the activity of her four "Kids", "Ma Capital" also has the responsibility of summarizing the activity of her four kids (revenue, expense, investment, and draws) for a period of time (monthly or yearly). Think of Owner's Equity (Capital) as Ma's Purse. Ma summarizes all the increases and decreases resulting from revenues, expenses, investments, and draws and puts the balance in her purse (capital). This summarizing activity is called **Closing the Books**. Closing The Books will be discussed more in a later lesson.

It should now be apparent that the assets (property) are subject to two kinds of claims (property rights), those arising from the rights (claims) of creditors (liabilities) and those arising from the rights (claims) of the owner (owner's equity).

Developing Our Different Versions Of the Accounting Equation

Since

(1) Property = Assets and

(2) Property Rights (Claims to the Property) = Liabilities + Owner's Equity (Capital),

the simple or abbreviated accounting equation Property = Property Rights expanded or restated now becomes

Assets = Liabilities + Owner's Equity (Capital).

We're now going to concentrate on the **Owner's Equity (Capital)** section of the equation. If you recall, the balance of Owner's Equity ("Ma Capital") is affected by her kids Revenue, Expense, Investment, and Draws.

Businesses normally operate with the objective of making a profit. Profit is determined by using two of "Ma Capital's Kids" (Revenue and Expense) and subtracting the expenses from revenue (income). Any profits made by a business go to the owner. Therefore, the effects of revenue (income) and expenses are shown under the Owner's Equity section of the accounting equation. An increase in revenues represents an increase in profit and therefore an increase in Owner's Equity ("Ma Capital"). An increase in expenses represents a decrease in profits and therefore a decrease in Owner's Equity ("Ma Capital").

"Kid Draws" and "Kid Investment" also affect the Owner's Equity ("Ma Capital") section of the accounting equation. Draws decrease Owner's Equity ("Ma Capital") and additional investments increase Owner's Equity ("Ma Capital").

- Summary of The Effects of "Ma's Kids" on Owner's Equity ("Ma Capital"):
- Owner Investments ("Kid Investment") increase Owner's Equity ("Ma Capital")
- Revenues ("Kid Revenue") increase Owner's Equity ("Ma Capital")
- Expenses ("Kid Expense") decrease Owner's Equity ("Ma Capital")
- Owner's Draws ("Kid Draws") decrease Owner's Equity ("Ma Capital")

Using the above information we can present this information in the following equation:

Current Owner's Equity (Capital) = Beginning Owner's Equity (Capital) + Owner's Investments + Revenues - Expenses - Draws

This new **Owner's Equity Equation** illustrates the relationships and effects investments, revenue, expense, and draws have on **Owner's Equity (Capital)**.

Let's take this one final step to arrive at our **Fully Expanded Accounting Equation** which includes all the components that make up and affect Owner's Equity (Capital).

Our Expanded Accounting Equation Assets = Liabilities + Owner's Equity (Capital) expanded or restated now becomes our **Fully Expanded Version**

Assets = Liabilities + Beginning Owner's Equity (Capital) + Additional Owner Investments + Revenues - Expenses - Draws.

In the Expanded Version of the Accounting Equation, "Ma Capital's Kids" are hiding behind her skirt. They're there; you just don't see them. The fully expanded version brings them out of hiding and shows you their effects on Owner's Equity ("Ma Capital").

While all three of the equations illustrate the relationship of property and property rights, the accounting equation **most often used and referred to** is the Expanded Equation:

Assets = Liabilities + Owner's Equity

Observation: In using the expanded accounting equation, if two of the three components are known, the third can easily be calculated by using some simple Algebra to rearrange the equation. Don't worry, you're not going to get an Algebra Lesson.

The accounting equation can be expressed in the following different ways:

- Asset emphasis:
Assets = Liabilities + Owner's Equity
- Equity emphasis:
Owner's Equity = Assets - Liabilities
- Liability emphasis:
Liabilities = Assets - Owner's Equity

So, You Can:

- Calculate Assets if Liabilities and Owner's Equity are known
Assets = Liabilities + Owner's Equity (Normal Formula)
- Calculate Owner's Equity if Assets and Liabilities are known
Owner's Equity = Assets - Liabilities
- Calculate Liabilities if Assets and Owner's Equity are known
Liabilities = Assets - Owner's Equity

Let's see if I fibbed.

If Liabilities are 70,000 and Owner's Equity is 30,000 what is the value of the Assets ?

Assets = Liabilities + Owner's Equity

Assets = 70,000 + 30,000

Assets = 100,000

If Assets are 100,000 and Liabilities are 70,000 what is the value of our Owner's Equity ?

Owner's Equity = Assets - Liabilities

Owner's Equity = 100,000 - 70,000

Owner's Equity = 30,000

And lastly, if Assets are 100,000 and Owner's Equity is 30,000 what is the value of our Liabilities ?

Liabilities = Assets - Owner's Equity

Liabilities = 100,000 - 30,000

Liabilities = 70,000

I will use both the simple or abbreviated version (Property = Property Rights) and the expanded version (Assets = Liabilities + Owner's Equity) of the Accounting Equation in this lesson to demonstrate bookkeeping concepts. Lesson 3 continues to explore the Fully Expanded Accounting Equation.

Types Of Transactions Table Using the Simple (Abbreviated) Accounting Equation

Property = Property Rights



Navigation:

Interactive Links are provided in this table in the Examples Of Transactions Column.

- Click on the Underlined Number (1,2,3,etc.) links to navigate to the Transaction Analysis Using The Simple Accounting Equation Table to see a sample transaction that illustrates the affect of this type of transaction on our Simple Accounting Equation.

Let's use our simple or abbreviated accounting equation and get an overview of the types of transactions that can occur and their effects on our simple equation. The table illustrates the four basic types of transactions represented by the letters a. b. c. and d. and their effects on our simple or abbreviated accounting equation.

Property =		Property Rights		Examples Of Transactions
Left Side =		Right Side		
(a)	Increase In Property	(a)	Increase In Property Rights	#1 #2 #4 #5 #10
(b)	Decrease In Property	(b)	Decrease In Property Rights	#3 #6 #7
(c)	Increase In One Type Of Property			#8
(c)	Decrease In Another Type Of Property			#8
		(d)	Increase In One Type Of Property Rights	#9
		(d)	Decrease In Another Type Of Property Rights	#9

What does the table tell us ?

Although transactions may require increases to both sides of the equation (left and right side both increase - transaction type **(a)**), decreases to both sides of the equation (left and right side both decrease - transaction type **(b)**), or an increase and decreases on the same side of the equation (increase and decrease on the left side - transaction type **(c)** or an increase and decrease on the right side transaction **(d)**), the **equation always balances**.

Did you also notice we made two entries for each of the example transactions illustrated in our table ? There's that **double entry** thing again. The table also illustrates that by using double entry bookkeeping the dollar amount of the property will at all times equal the dollar amount of the property rights.

Business Transactions and Their Effects on The Accounting Equation

The remainder of this lesson will be examples used to demonstrate recording transactions using the double entry bookkeeping system in conjunction with our accounting equation.

We are now going to analyze the effects of typical types of business transactions and how they affect our Accounting Equation. We will use the fictional ABC business which is a service type business (lawn mowing), sole proprietorship, uses double entry accounting, and the accrual basis of accounting for our example.

Our analysis will use both the simple or abbreviated and expanded Accounting Equation to demonstrate the transaction effects.



ABC Transactions

A brief analysis of the effects follows each transaction. A more in depth analysis is presented in later lessons.

- 1.** ABC mows a client's yard and receives a check from the customer for \$50 for the service provided. The property cash is increased and the owner's property rights (claims to the property) are increased.
- 2.** ABC purchases \$100 worth of office supplies for inventory and stores them in their storage room. The office supply store gives them an invoice that allows them to pay for them in 15 days (on account). The property office supplies is increased and the creditor's property rights (claims to the property) are increased.
- 3.** ABC places an ad in the local newspaper receives the invoice from the supplier and writes a check for \$25 to the newspaper. The property cash is decreased and the owner's property rights (claims to the property) are decreased.
- 4.** ABC purchases five mowers for \$10,000 and finances them with a note from the local bank. The property equipment (mowers) is increased and the creditor's property rights (claims to the property) are increased.
- 5.** ABC mows another customer's yard and sends the customer a bill (invoice) for \$75 for the service they performed. They allow their customer 10 days to pay them for this service (on account). The property amounts owed by customers is increased and the owner's property rights (claims to the property) are increased.
- 6.** The owner of ABC needs a little money to pay some personal bills and writes himself a check for \$500. The property cash is decreased and the owner's property rights (claims to the property) are decreased.
- 7.** ABC pays the office supply company \$100 with a check for the office supplies that they charged (promised to pay). The property cash is decreased and the creditor's property rights (claims to the property) are decreased.

8. ABC receives a check from the customer who they billed (invoiced) \$75 for services and allowed 10 days to pay.

The property cash is increased and the property amounts owed by customers are reduced. This is actually a swap of one type of property for another.

9. ABC purchased some mulch for \$60 and received an invoice from their supplier who allows them 15 days to pay. The mulch was used on a customer's yard.

The property right amount owed a supplier is increased and the owner's claim on the property rights (claims to the property) is decreased.

10. ABC bills (prepares an invoice) the customer \$80 for the mulch and mowing his yard and receives a check for \$80 from the customer.

The property cash is increased and the owner's property rights (claims to the property) are increased.

Transaction Analysis Using The Simple (Abbreviated) Accounting Equation

Property = Property Rights



Navigation:

Interactive Links are provided in this table.

- Click on the Underlined Return To Types Of Transactions Table Link to Return To The Types of Transaction Table.

Transactions	Property = Left Side		Property Rights Right Side	
	Increase	Decrease	Decrease	Increase
1. ABC mows a client's yard and receives a check from the customer for \$50 for the service provided. Return To Types Of Transactions Table	50			50
2. ABC purchases \$100 worth of office supplies and stores them in their storage room. The office supply store gives them an invoice that allows them to pay for them in 15 days (on account). Return To Types Of Transactions Table	100			100
3. ABC places an ad in the local newspaper receives the invoice from the supplier and writes a check for \$25 to the newspaper. Return To Types Of Transactions Table		25	25	

4. ABC purchases five mowers for \$10,000 and finances them with a note from the local bank. Return To Types Of Transactions Table	10,000			10,000
5. ABC mows another customer's yard and sends the customer a \$75 bill (invoice) for the service they performed. They allow their customer ten (10) days to pay them for this service (on account). Return To Types Of Transactions Table	75			75
6. The owner of ABC needs a little money to pay some personal bills and writes himself a check for \$500. Return To Types Of Transactions Table		500	500	
7. ABC pays the office supply company \$100 with a check for the office supplies that they charged (promised to pay). Return To Types Of Transactions Table		100	100	
8. ABC receives a check from the customer who they billed (invoiced) \$75 for services and allowed 10 days to pay. Return To Types Of Transactions Table	75	75		
9. ABC purchased some mulch for \$60 and received an invoice from their supplier who allows them 15 days to pay. The mulch was used on a customer's yard. Return To Types Of Transactions Table			60	60
10. ABC bills (prepares an invoice) the customer \$80 for the mulch and mowing his yard and receives a check for \$80 from the customer. Return To Types Of Transactions Table	80			80
Totals	\$10,380 Increase	\$700 Decrease	\$685 Decrease	\$10,365 Increase
Total Net Changes	\$9,680 Increase		\$9,680 Increase	

Types Of Transactions Table Using the Expanded Accounting Equation

Assets = Liabilities + Owner's Equity



Navigation:

Interactive Links are provided in this table in the Examples Of Transactions Column.

- Click on the Underlined Number (1,2,3,etc.) links to navigate to the Transaction Analysis Using The Expanded Accounting Equation Table to see a sample transaction that illustrates the affect of this type of transaction on the Expanded Accounting Equation.

Now let's use our expanded accounting equation and get an overview of the types of transactions that can occur and their effects on our expanded equation. The table illustrates the four basic types of transactions represented by the letters a. b. c. and d. and their effects on our expanded accounting equation.

Assets =		Liabilities + Owner's Equity		Examples Of Transactions
Left Side =		Right Side		
(a)	Increase In Assets	(a)	Increase In Liabilities or Owner's Equity	#1 #2 #4 #5 #10
(b)	Decrease In Assets	(b)	Decrease In Liabilities or Owner's Equity	#3 #6 #7
(c)	Increase In One Type Of Asset			#8
(c)	Decrease In Another Type Of Asset			#8
		(d)	Increase In One Type of Liability or Owner's Equity	#9
		(d)	Decrease In Another Type of Liability or Owner's Equity	#9

Transaction Analysis Using The Expanded Accounting Equation

Assets = Liabilities + Owner's Equity



Navigation:

Interactive Links are provided in this table.

- Click on the Underlined Return To Types Of Transactions Table Link to Return To The Types of Transaction Table.

- Click on the Underlined Dollar Amount Link to navigate to the Equity Table and see the effects of Revenue, Expenses, or Draws.

Transactions	Assets = Left Side		Liabilities + Right Side		Owner's Equity Right Side	
	Increase	Decrease	Decrease	Increase	Decrease	Increase
1. ABC mows a client's yard and receives a check from the customer for \$50 for the service provided. Return To Types Of Transactions Table	50					<u>50</u>
2. ABC purchases \$100 worth of office supplies and stores them in their storage room. The office supply store gives them an invoice that allows them to pay for them in 15 days (on account). Return To Types Of Transactions Table	100			100		
3. ABC places an ad in the local newspaper receives the invoice from the supplier and writes a check for \$25 to the newspaper. Return To Types Of Transactions Table		25			<u>25</u>	
4. ABC purchases five mowers for \$10,000 and finances them with a note from the local bank. Return To Types Of Transactions Table	10,000			10,000		
5. ABC mows another customer's yard and sends the customer a \$75 bill (invoice) for the service they performed. They allow their customer ten (10) days to pay them for this service (on account). Return To Types Of Transactions Table	75					<u>75</u>
6. The owner of ABC needs a little money to pay some personal bills and writes himself a check for \$500. Return To Types Of Transactions Table		500			<u>500</u>	

7. ABC pays the office supply company \$100 with a check for the office supplies that they charged (promised to pay). Return To Types Of Transactions Table		100	100			
8. ABC receives a check from the customer who they billed (invoiced) \$75 for services and allowed 10 days to pay. Return To Types Of Transactions Table	75	75				
9. ABC purchased some mulch for \$60 and received an invoice from their supplier who allows them 15 days to pay. The mulch was used on a customer's yard. Return To Types Of Transactions Table				60	<u>60</u>	
10. ABC bills (prepares an invoice) the customer \$80 for the mulch and mowing his yard and receives a check for \$80 from the customer. Return To Types Of Transactions Table	80					<u>80</u>
Totals	\$10,380	\$700	\$100	\$10,160	\$585	\$205
Net Change	\$9,680 Increase		\$10,060 Increase		\$380 Decrease	
Total Net Changes	\$9,680 Increase		\$9,680 Increase			

Equity Table

Analysis of the Effects of Revenue, Expense, and Draws ("Ma Capital's Kids") on Owner's Equity (Capital)



Navigation:

Interactive Links are provided in this table.

- To Return To The Analysis Using The Expanded Accounting Equation Table Click on the Underlined Dollar Amount.

In the previous table, we entered all the transactions that affected Owner's Equity under one heading; namely, Owner's Equity and disregarded whether it was a revenue, expense, or draw item. The following table illustrates where the transaction affecting Owner's Equity would actually be entered.

This table is provided to help illustrate the effects that "Ma Capital's "Kids" Revenue, Expense, and Draw have on Owner's Equity ("Ma Capital"). Of course only the sample transactions that affect Owner's Equity have been included.

Instead of recording transactions directly to "Ma Capital" (Owner's Equity), proper bookkeeping actually uses her kids revenue, expense, and draws to record the increases and decreases to "Ma Capital" (Owner's Equity) in order to provide us with the answers to the how and why the owner's claim to the business's property increased or decreased.

	"Ma Capital"		"Ma's Kids"		
Proper Recording Actually Uses Revenue, Expense & Draws Instead Of Owner's Equity	Original Recording		Proper Recording Uses		
Transactions	Owner's Equity Right Side		Revenue	Expense	Draw
	Decrease	Increase	Revenue Increases Resulting In an Increase to Equity	Expenses Increase Resulting In a Decrease to Equity	Draws Increase Resulting in a Decrease to Equity
1. ABC mows a client's yard and receives a check from the customer for \$50 for the service provided.		50	<u>50</u>		
3. ABC places an ad in the local newspaper receives the invoice from the supplier and writes a check for \$25 to the newspaper.	25			<u>25</u>	
5. ABC mows another customer's yard and sends the customer a \$75 bill (invoice) for the service they performed. They allow their customer ten (10) days to pay them for this service (on account).		75	<u>75</u>		
6. The owner of ABC needs a little money to pay some personal bills and writes himself a check for \$500.	500				<u>500</u>
9. ABC purchased some mulch for \$60 and received an invoice from their supplier who allows them 15 days to pay. The mulch was used on a customer's yard.	60			<u>60</u>	

10. ABC bills (prepares an invoice) the customer \$80 for the mulch and mowing his yard and receives a check for \$80 from the customer.		80	<u>80</u>		
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What should we pick up and learn from these tables and example transactions recorded in the tables ?

Here's What

1. How different types of business transactions affect the Accounting Equation.
 - How each transaction was **recorded twice** illustrating **double entry** bookkeeping.
 - The total amounts for the tables prove the self-balancing nature of the Accounting Equation.
 - How transactions may require increases to both sides of the equation (increase left side and increase right side), decreases to both sides of the equation (decrease left side and decrease right side), or an increase and decreases on the same side of the equation (increase and decrease the left side or increase and decrease the right side), but the equation must always balance.
 - The Equity Table illustrates that, while transactions that affect Owner's Equity could be entered using only one column, additional useful information is obtained by breaking Owner's Equity into its component parts (kids) using the revenue, expense, and draws categories to record the transactions.
 - That revenues increase owner's equity while expenses and draws decrease owner's equity.
 - Let's see if anything stuck to your brain cells about the accounting equation and the effects of typical types of business transactions. I won't be cruel. Well, maybe a little, because you'll be analyzing the same transactions that we just got through reviewing. The only difference is that instead of me analyzing them, it's up to you.



Oh no, you're back in the interrogation room ! Let's see how we'll you do on these skill tests about how transactions affect the Accounting Equation.

[Transactions and the Expanded Accounting Equation Skills Test](#)

Uses Owner's Equity to record all of the transactions that affect Owner's Equity.

[Transactions and the Fully Expanded Accounting Equation Skills Test](#)

Uses Revenue, Expense, and Draws ("Ma's Kids") to record the transactions that affect Owner's Equity.

Note:Skill Tests use JavaScript which is enabled on most computers.

Comment:Before we end our discussion of equations, another equation that you may run across is what I call the **Debit and Credit Equation**. The Debit and Credit Equation is just a variation (rearranged version) of the

Fully Expanded Accounting Equation. Some simple Algebra was used to rearrange the major types of accounts.

So you know it looks like this:

Debit and Credit Equation

Assets + Draws + Expenses = Liabilities + Owner's Equity + Revenue

Debit Balance Accounts = Credit Balance Accounts

In this equation all the normal debit balance accounts are on the left side of the equal sign and all the normal credit balance accounts are on the right side of the equal side. This equation is sometimes used to help understand Debits and Credits which we'll be discussing in our next lesson.



Have Mercy I'm ready for a break ! We've covered quite a bit in this lesson. I'll have to agree you do deserve a break. See You In Lesson 3 where we cover Debits and Credits.

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