

## Accounting Principles Guide

Discussion of principles applicable to use of spreadsheet available for download at:

[www.legaltree.ca](http://www.legaltree.ca)

### **Accounting equation (income statement and balance sheet)**

We should be clear at the start that this spreadsheet is designed for small businesses, with likely just a few shareholders, and the discussion of account principles is presented from that perspective.

So lets start with the accounting equation, because understanding that is very important. The accounting equation can be written in various ways depending on which variables are put on which side of the equals sign, but I think it is most easily understood when written as follows:

$$\text{Assets} - \text{Liabilities} = \text{Shareholder Equity}$$

This is a good way to write it because most people understand that assets are the good stuff, and generally a business wants to have as many assets as possible.

Liabilities are the bad stuff, they indicate indebtedness of the business to others.

So assets minus liabilities is the net overall goodness of the business, if it is a positive number there is net goodness in the business, but if liabilities exceed assets such that Assets – Liabilities is a negative number then the business is in a loss position.

The net amount of goodness in the business is the shareholder equity, because after all it is the shareholders who will be entitled to the net profits from the business.

Because shareholders typically pay some amount for their shares when incorporating a company Shareholder Equity can be viewed as being made up of Shareholder Capital and Retained Earnings.

$$\text{Assets} - \text{Liabilities} = \text{Shareholder Capital} + \text{Retained Earnings}$$

Shareholder capital, being the initial investment in the business, is often a small dollar amount in the case of closely held private companies, perhaps even just \$1, and it does not often change, in other words it is not an amount that fluctuates each month, or even each year. In such small business corporations the shareholders often make shareholder loans to the business to provide the business with money to get going, and then that shareholder loan will be repaid when the corporation has the ability to repay it.

This is not invariably the way companies are set up, and some companies are funded through large shareholder capital contributions, but for now lets assume a corporation with just one shareholder who pays just \$1 for his shares, and then finances the business through shareholder loans. In that case the shareholder capital will be just \$1.

$$\text{Assets} - \text{Liabilities} = \$1 + \text{Retained Earnings}$$

Assume that for many years the business continues with the single shareholder who contributed just the \$1 and that there are no changes in shareholder capital in the years following. This is actually not an uncommon situation, and it allows us to simplify and better understand the other parts of the accounting equation.

Note that when the shareholder put that \$1, it will sit in the bank account which is an asset account, so after this very first transaction we can see that the accounting equation balances:

$$\begin{aligned} \text{Assets} - \text{Liabilities} &= \$1 + \text{Retained Earnings} \\ \$1 - \$0 &= \$1 + \$0 \\ \$1 &= \$1 \end{aligned}$$

Add one dollar to the left and add one dollar to the right, and if no other transactions have occurred yet then liabilities and retained earnings would be zero, so we have equal amounts on each side and the accounting equation, and so it balances.

But for now lets keep the general description of “assets” and not indicate assets as comprising just the \$1.

$$\text{Assets} - \text{Liabilities} = \$1 + \text{Retained Earnings}$$

And for the rest of this discussion lets just ignore that \$1 that is shareholder capital, and look at the rest of the accounting equation.

$$\text{Assets} - \text{Liabilities} = \cancel{\$1} + \text{Retained Earnings}$$

Next lets consider retained earnings. Retained Earnings can be thought of as the cumulative net profit since the start of the business, minus the shareholder dividends that have been paid out.

Shareholder dividends occur when the business pays out excess cash to shareholders, but lets come back to that later and for now just assume that no dividends are paid and that retained earnings is purely a matter of cumulative net profit.

$$\text{Assets} - \text{Liabilities} = \cancel{\$1} + \text{Cumulative net profit}$$

So lets break that down a bit. Consider the first year of business. The business incurs some liabilities with the hope of making a profit:

- take on shareholder loans,
- perhaps borrow from the bank,
- perhaps buy goods on credit (for example if you are running a construction business, you might buy materials on credit).

So, to start with you will incur some liabilities.

## Liabilities

Then hopefully the business makes some sales, gets some income, and puts money in the bank account, which is an asset account, so now the business has some assets, and once there are assets one can subtract the liabilities:

$$\text{Assets} - \text{Liabilities}$$

Hopefully the assets will exceed the liabilities, and the business will have a net profit, and still ignoring that \$1, the amount by which the money in bank exceeds the liabilities will be the amount of the net profit for the business:

$$\text{Assets} - \text{Liabilities} = \$1 + \text{Net profit for first year}$$

Putting that back into accounting speak, at the end of the first year assets minus liabilities will tell you the amount of retained earnings (still ignoring the \$1 of shareholder capital for the time being).

$$\text{Assets} - \text{Liabilities} = \$1 + \text{Retained Earnings}$$

So retained earnings is the net goodness which has accumulated in the business, and having a big positive number for retained earnings is a good thing

So hopefully in year #2 the business will take in more cash than the amount the liabilities increase by during year #2, and then the net profit from year #2 will be added to the net profit from year #1, and then the overall assets held at the end of year #2 minus overall liabilities at the end of #2 will indicate the cumulative net profit of the business:

$$\text{Assets} - \text{Liabilities} = \$1 + \text{Cumulative net profit ("retained earnings")}$$

Remember that, until the first dividends are paid out, retained earnings are essentially the cumulative net profit of the business.

Of course, if liabilities exceed assets at the end of the first year the business would have a net loss rather than a net profit, and indeed retained earnings can be a negative number that grows year over year if the business continues to be unprofitable. But to keep things simple for this discussion we will assume the business makes a profit in its first year, and in each subsequent year. In this situation the change in "Assets - Liabilities" for the year matches the net profit for the year, and that is the amount by which the retained earnings of the business will increase if no shareholder dividends are paid out.

OK, so that is a theoretical explanation of the accounting equation, but how does it break down on a practical level when entering in the books of the business the transactions that occurred? In order to see how things play out in practice one has to understand that there are certain accounts underlying each of assets, liabilities, and retained earnings:

<b>Assets</b>	<b>Liabilities</b>	<b>Retained Earnings</b>	

And keeping in mind that retained earnings is cumulative net profit, we can break retained earnings down into income and expense accounts given that income minus expenses is how one calculates the net profit for the business:

<b>Assets</b>	<b>Liabilities</b>	<b>Retained Earnings</b>	
		<b>Income</b>	<b>Expense</b>

And lets add a shareholder capital section, remember that is the \$1 contributed to purchase shares in the corporation, and although it is a small amount it must be counted in order for the accounting equation to balance:

<b>Assets</b>	<b>Liabilities</b>	<b>Shareholder capital</b>	<b>Retained Earnings</b>	
			<b>Income</b>	<b>Expense</b>

And lets put in a divider line showing where the equals sign would be in the accounting equation:

$$\text{Assets} - \text{Liabilities} = \text{Shareholder Capital} + \text{Retained Earnings}$$

Assets	Liabilities		Shareholder capital	Retained Earnings	
				Income	Expense

And then lets list some of the accounts that daily transactions are entered in. So for asset accounts you might have the following:

Assets	Liabilities		Shareholder capital	Retained Earnings	
				Income	Expense
Cash in bank account					
Prepaid expenses					
Accounts receivable					

For liability accounts you might have the following:

Assets	Liabilities		Shareholder capital	Retained Earnings	
				Income	Expense
Cash in bank account	Shareholder loan				
Prepaid expenses	Credit card debt				
Accounts receivable	Taxes payable				
	Accounts payable e.g. goods bought on credit				

For shareholder capital lets just put in the \$1 amount:

Assets	Liabilities	Shareholder capital	Retained Earnings	
			Income	Expense
Cash in bank account	Shareholder loan	\$1		
Prepaid expenses	Credit card debt			
Accounts receivable	Taxes payable			
	Accounts payable e.g. goods bought on credit			

And then of income you might have a “Revenue from Sales” account:

Assets	Liabilities	Shareholder capital	Retained Earnings	
			Income	Expense
Cash in bank account	Shareholder loan	\$1	Revenue from sales.	
Prepaid expenses	Credit card debt			
Accounts receivable	Taxes payable			
	Accounts payable e.g. goods bought on credit			

And then finally for expense accounts you might have the following:

Assets	Liabilities	Shareholder capital	Retained Earnings	
			Income	Expense
Cash in bank account	Shareholder loan	\$1	Revenue from sales.	Rent
Prepaid expenses	Credit card debt			Advertising
Accounts receivable	Taxes payable			Raw materials
	Accounts payable e.g. goods bought on credit			Cell phone
				Bank fees
				Salaries

So having listed some of the typical accounts one can see how when a transaction happens in the business, there are sometimes impacts on both sides of the accounting equation, i.e. opposite sides of the red line. For example:

- If a cash sale is made, the “Cash in bank” account will go up, and the “Revenue from sales” account will also go up.
- If the business spends cash to purchase raw materials, then the “Cash in bank” account will go down, and the “Raw materials” expense account will go up.

This is where the concept of double entry accounting comes in, each transaction must be recorded twice, and those entries must be such that the accounting equation still balances, for example, we just saw:

- If the business gets cash in from sales, then there will be an increase in assets, and an increase in income, and that is an equal increase on each side of the accounting equation, and so the equation will still balance.
- If the business spends cash to buy raw materials, then assets go down and expenses go up, but that is correct because the overall effect on the right hand side of the accounting equation is decrease, because remember that expenses are subtracted from income to calculate cumulative net profit, or retained earnings. In other words, you are subtracting an increased amount of expenses so overall there will be a decrease on the right hand side of the accounting equation to match the decrease in assets on the left hand side of the accounting equation.

However, you do not always need the entries for the double entry pair to be on the opposite side of the equation, in this case opposite sides of the red line. Indeed, you can have both entries on the same side. For example, if you borrow money from the bank then:

- the “Cash in bank” account will go up, and
- liabilities, which are on the same side of the red line, also go up – because now the business owes an increased amount to the bank.

Income is not impacted when the business borrows money from the bank, and the actual money borrowed is not an expense, but rather a liability, so in this case both impacts are on the left side of the red line, assets go up, and liabilities go up.

Part of the challenge of bookkeeping is figuring out what accounts to do the double entries in, but luckily the spreadsheet available for download will help you along and give quick feedback as to whether it seems the double entry pair is correctly entered.

So now that we have gone over the basics of the accounting equation, lets discuss the issue of dividends which we said earlier we would leave for later. Initially it was useful to think of retained earnings as simply cumulative net income, but when adding consideration of dividends one can consider the phrase “retained earnings” very literally, being the earnings of the business that have been retained in the business rather than being paid out to shareholders. Then if the business later pays out dividends then that reduces the retained earnings that have been accumulated over time. So it is helpful to think of retained earnings as the bucket of money accumulated since the business started, but keep in mind that from time to time the business might dip into that bucket and share out some of that money to the shareholders as a reward for sticking through the tough times and waiting for the business to reach a profitable situation.

So lets break up the right end of the table to be not just cumulative net profit, but rather a retained earnings account, which will decrease when dividends are paid out, and then separately list income and expense accounts which are used to calculate net profit for each particular year:

<b>Assets</b>	<b>Liabilities</b>	<b>Shareholder capital</b>	<b>Retained earnings</b>	<b>Income accounts</b>	<b>Expense accounts</b>
Cash in bank account	Shareholder loan	\$1		Revenue from sales.	Rent
Prepaid expenses	Credit card debt				Advertising
Accounts receivable	Taxes payable				Raw materials
	Accounts payable e.g. goods bought on credit				Cell phone
					Bank fees
					Salaries

So clearly at the start of the business retained earnings would be \$0, but at the end of the end of the first year the difference between the income and expense accounts will indicate the net profit, and then at the end of that first year the income and expense accounts will be set back to zero and the net profit amount will be moved into retained earnings:



<b>Assets</b>	<b>Liabilities</b>	<b>Shareholder capital</b>	<b>Retained earnings</b>	<b>Income accounts</b>	<b>Expense accounts</b>
Cash in bank account	Shareholder loan	\$1		Revenue from sales.	Rent
Prepaid expenses	Credit card debt				Advertising
Accounts receivable	Taxes payable				Raw materials
	Accounts payable e.g. goods bought on credit				Cell phone
					Bank fees
					Salaries

Earlier on when making the assumption that dividends would not be paid out such that retained earnings would simply be cumulative net profit it was okay to indicate the retained earnings as being the difference between income and expenses, but now that we have acknowledged the reality that dividends may be paid out and so indicated retained earnings to be separate from income and expenses, it is better to remove the income and expense accounts from the accounting equation and break them off to one side, keeping in mind that at the end of each year the net profit calculated from income minus expenses will be transferred over as an increase in the retained earnings account:

<b>Assets</b>	<b>Liabilities</b>	<b>Shareholder capital</b>	<b>Retained earnings</b>
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		

<b>Income accounts</b>	<b>Expense accounts</b>
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Through the above process we have in fact now laid out the information that is presented in each of the income statement and the balance sheet:

Balance Sheet

Assets	Liabilities	Shareholder capital	Retained earnings
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		

Income Statement

Income accounts	Expense accounts
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Except that because the income statement for a given year calculates the net profit (or loss) which is then subsequently reported on the balance sheet, the income statement should be shown as being before the balance sheet, so switch them around and present them in that order:

Income Statement

Income accounts	Expense accounts
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Balance Sheet

Assets	Liabilities	Shareholder capital	Retained earnings
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		

And again we should keep in mind that the net profit calculated on the income statement is taken to the retained earnings section of the balance sheet:

Income Statement

Income accounts	Expense accounts
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Balance Sheet

Assets	Liabilities	Shareholder capital	Retained earnings
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		



So that is an overview of the accounting equation and how the data in the income statement is added to the balance sheet to determine if the balance sheet balances.

## Understanding ledgers

So now that the income statement and balance sheet have been explained, let's look at how the information listed in those documents is prepared, and that takes place in the ledgers.

Income Statement

Income accounts	Expense accounts
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Balance Sheet

Assets	Liabilities	Shareholder capital	Retained earnings
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		

Apart from the net profit which is calculated on the income statement and then imported into the equity section of the balance sheet, all figures listed on the income statement and the balance sheet come from the ledgers.

Each business will have to develop a set of ledger accounts that make sense given the nature of the business, and the ledgers referred to here are merely examples of the types of ledgers sometimes used.

Under the double entry accounting method all transactions are double entered, meaning that each amount processed by the business must be entered in two ledgers. This allows for checking of all data entered into the ledgers by checking that a tally of all debit entries matches a tally of all credit entries. In order for debits to match credits, each double entry pair must involve a debit in one account, and a credit in a corresponding double entry account.

Unfortunately, there can be no simple rule that debit is up (or increase) and credit is down (or decrease), or vice versa, and this is made clear by considering when a cash sale is made. That will result in an increase in the cash account, but also in increase in the revenue account, so those are both increases but one has to be a debit and the other a credit so there cannot be a simple rule that debit is increase and credit is decrease.

Instead, what is used is a set of rules as to whether debits and credits are increases or decreases according to the category of account.

For asset accounts, like the cash account, an increase is recorded as a debit, and a decrease as a credit.

Income Statement

Income accounts	Expense accounts
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Balance Sheet

Assets	Liabilities	Shareholder capital	Retained earnings
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		

Debit + & Credit -
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For an income account, an increase is recorded as a credit, and a decrease as a debit.

Income Statement

Balance Sheet

Income accounts	Expense accounts
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Assets	Liabilities	Shareholder capital	Retained earnings
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		

Debit - & Credit +
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Debit + & Credit -
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So with these cheat sheets written under the categories of account, we can see that, for example a cash sale of goods or services, that will increase the asset account named Cash, being a debit, and will increase an income account, being a Credit, and so we will have a debit and a credit for this transactions such that debits and credits will, overall, still balance.

When starting out the best thing to do is simply to memorize for which accounts a debit is an increase and for which a credit is an increase, or else keep a cheat sheet listing out the rules:

Income Statement

Balance Sheet

Income accounts	Expense accounts
Revenue from sales.	Rent
	Advertising
	Raw materials
	Cell phone
	Bank fees
	Salaries

Assets	Liabilities	Shareholder capital	Retained earnings
Cash in bank account	Shareholder loan	\$1	
Prepaid expenses	Credit card debt		
Accounts receivable	Taxes payable		
	Accounts payable e.g. goods bought on credit		

Debit - & Credit +	Debit + & Credit -
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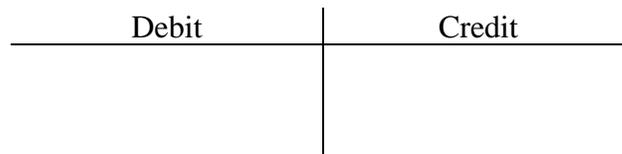
Debit + & Credit -	Debit - & Credit +
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Debit - & Credit +	Debit - & Credit +
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For easy reference, a cheat sheet indicating the rules is included on the Ledger Index!!! tab of the spreadsheet available for download.

<u>Debit + &amp; Credit -</u>	<u>Debit - &amp; Credit +</u>
<b>Balance Sheet accounts</b>	
*****	*****
<b>Assets!!!</b>	<b>Liabilities!!!</b>
*****	*****
1001 - RBC Chequing Account!	2001 - RBC Mastercard!
1002 - iTrade - cash!	2002 - Debt owed to SH!
1003 - iTrade - holdings!	2003 - Accounts payable!
1004 - Paypal test account!	2004 - GST collected and to be remitted!
1006 - AR - Client1 (excl GST & PST)!	2005 - PST collected and to be remitted!
1007 - AR - Client2 (excl GST & PST)!	
1008 - Prepaid expenses (incl. PST but excl. GST)!	*****
1009 - GST receivable!	<b>Equity!!!</b>
	*****
	3001 - Shareholder Capital!
	3002 - Retained earnings (before consider net profit/loss)!
<b>Profit and loss accounts</b>	
*****	
<b>Expense accounts!!!</b>	
*****	
5001 - Salary - John Doe (excluding source deductions)!	
5002 - Inc. tax w/held (& remitted to CRA for John Doe)!	
5003 - CPP for John Doe!	
5004 - Salary - Jane Brown (excluding source deductions)!	
5005 - Inc. tax w/held (& remitted to CRA for Jane Brown)!	
5006 - CPP for Jane Brown!	
5007 - CPP - Employer contribution!	
5008 - Rent (no tax)!	*****
5009 - Cell phone (incl. PST but excl. GST)!	<b>Income accounts!!!</b>
	*****
	4001 - Client1 income (excl GST & PST)!
	4002 - Client2 income (excl GST & PST)!

So just a final few points then, if you have heard of people referring to T accounts, that is a system to help keep track of which side entries are to be made on, because in all cases debits are shown on the left side of an account and credits on the right side.



People sometimes graphically list out T accounts one below the other and then write in the data to check that each entry on the left (debit) side has a corresponding entry on the right (credit) side to confirm that they properly understand the double entry transaction.

It is also worth briefly mentioning that double entry accounting and balancing of the accounting equation is a method that can be applied to either cash or accrual accounting. The cash

accounting method and the accrual accounting method are simply two ways of treating when income and expenses are recorded in the business: do you record the transaction only when the money actually changes hands, or do you record it when the obligation to pay arises? Under accrual accounting revenues and expenses are recorded when they are incurred, regardless of when cash is exchanged e.g. if an invoice is issued to a customer in 2017, but will not be paid until 2018, under accrual accounting the invoice amount is recorded in income (and in accounts receivable) in 2017 and treated as income for the 2017 financial year. Then, in 2018, when the cash comes in there will be double entries in the bank account, and in accounts payable. Under a cash accounting method the invoice would not be recorded at all until the cash is actually received in 2018. The accrual method is generally more popular because it gives a more realistic idea of income and expenses during a period of time, and in some cases tax laws require that the accrual method be used.