Accounting Equation

Objectives

After going through this lesson, you shall be able to understand the following concepts.

• Meaning of accounting equations
• Steps to prepare an accounting equation

Meaning of Accounting Equations

It is a mathematical equation which shows equality between *Resources obtained from funds and Sources of funds*. Here resources means assets (both tangible as well as intangible) such as Land, Building, Plant and Machinery, Cash, Bank, Patents, Trademarks etc. obtained by an enterprise from its funds. On the other hand, sources of funds refer to the sources from where an enterprise has obtained funds for buying their resources. It includes, *internal fund*s (or internal equities or owner's equity) and *external fund*s (or external equities or borrowed funds). Internal funds represent the amount invested by the owner in the business and external funds show the amount obtained from the outsiders creating financial obligation on an enterprise. Therefore, an accounting equation can be represented as:
Resources obtained from Funds = Sources of funds;
or
Total Assets = Internal Fund (*or Internal Equities or Owner's Equity*) + External Fund (*or External Equities*);
or
Simply as, **Assets = Capital + Liabilities**
External Parties (outsiders) have their claim in priority to Internal Party (owner) over the assets of an enterprise. Therefore, internal fund balance (or capital) is a residual balance of total assets, left after paying off the external funds (or liabilities) *i.e.* Capital = Assets – Liabilities.
As each business transaction has two sided effect, therefore, both the sides of an accounting equation always stands equal. This is also based on the accounting principle of duality.

Steps to prepare an accounting equation

(1) Analyse transaction in detail and identify how assets, liabilities and capital balances are affected by it.

(2) Effect in terms of increase or decrease in the balance of assets, liabilities or capital is identified.

(3) If there is an increase then it is added to and if there is a decrease then it is subtracted from the respective asset, liability or capital account.

(4) At last, ensure that *total of Left side* represented by Assets is always equal to *total of Right side* represented by the sum of Liabilities and Capital.

Effect of Transaction on the Accounting Equation
As we consider all the transactions from the business point of view, so whenever we consider effects of any transaction on the assets, liabilities or capital, then we have to keep two things in mind.

(i) Measure effect of a transaction in terms of increase or decrease in the balance of asset, liabilities or capital.

(ii) Both sides of the equation should always be equal.

Note- If after taking any effect of a transaction, both sides of the equation mismatch or becomes unequal, then surely there is a mistake on your side in taking an effect of the transaction. In no case, both sides can get unequal because in accounts we record all the transactions on the principle of duality. As per this principle, every transaction has a dual effect of debit and credit with the same amount or simply, there is an increase and decrease with same amount. Therefore, both the sides i.e. Assets (Left side) and sum of Capital and Liabilities (Right side) always stands equal.

Now let's consider different related transactions one by one and effect of each transaction on the accounting equation.

(a) Balbir started business with cash of Rs 35,000.
In the given transaction, cash is brought by Balbir to start the business. Asset in the form of cash is increasing on the Left hand side and as capital is introduced, therefore, capital is increasing on the Right hand side. Hence, both the sides of an accounting equation will stand equal.

Particulars	**Assets**	**=**	**Liabilities**		**Capital**

	Cash (Rs)			+	(Rs)
a. Started business with cash	35,000	=			35,000
Balance	**35,000**	**=**			**35,000**

(b) Purchased goods from Vishal on credit for Rs 22,000.
In the given transaction, goods are purchased from Vishal on credit. It implies, increase of asset in the form of stock on the left hand side and as goods are purchased on credit therefore, creditors are also increasing.

Particulars	Assets			=	Liabilities		Capital
	Cash (Rs)	+	Stock (Rs)		(Rs)Creditors (Rs)	+	(Rs)
Old Balance	35,000			=			35,000
Current transaction			+22,000		+22,000		
New Balance	**35,000**	**+**	**22,000**	**=**	**22,000**	**+**	**35,000**

(c) Goods sold to Vinayak in cash Rs 10,000.
In the given transaction, goods are sold to Vinayak in cash. By this, asset in the form of cash is increasing on the Left hand side and on the other hand, again asset in the form of stock is decreasing on the Left Hand side. As asset is increasing and decreasing simultaneously on the same side, therefore both the sides of the equation stand equal.

Particulars	Assets			=	Liabilities		Capital
	Cash (Rs)	+	Stock (Rs)		Creditors (Rs)	+	(Rs)
Old Balance	35,000	+	22,000	=	22,000		35,000
Current transaction	+10,000	+	–10,000				
New Balance	**45,000**	**+**	**12,000**	**=**	**22,000**	**+**	**35,000**

(d) Goods sold to Vinod for Rs 10,000 (costing Rs 8,000).
In the given transaction, goods are sold to Vinod on credit. By this, asset in the form of Debtors (Vinod) is increasing with the sale price of Rs 10,000. On the other hand, asset in the form of Stock is decreasing with the cost price of Rs 8,000. The difference between the Selling Price and the Cost Price of Rs 2,000 (10,000 − 8,000) is termed as *profit* and it will be added to the Capital balance on the Right Hand side. On the Left Hand Side, there is an increase by Rs 10,000 and decrease by Rs 8,000; thus there is an overall net increase of Rs 2,000, whereas on the Right hand side, there is an increase of Capital with an amount of Rs 2,000 (profit). Hence, both the sides of the equation stand equal.

Particulars	**Assets**					**=**	**Liabilities**		**Capital**
	Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Debtors (Rs)**		**Creditors (Rs)**	**+**	**(Rs)**
Old Balance	45,000	+	12,000			=	22,000		35,000
Current transaction			−8,000	+	+10,000				2,000
New Balance	**45,000**	**+**	**4,000**	**+**	**10,000**	**=**	**22,000**	**+**	**37,000**

(e) Purchased furniture for Rs 12,000.
In the given transaction, asset in the form of furniture is increased by Rs 12,000 and on the same side another asset in the form of cash is decreased by Rs 12,000. As asset is increasing and decreasing simultaneously on the same side, therefore both the sides of the equation stand equal.

Particulars	**Assets**							**=**	**Liabilities**		**Capital**
	Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Debtors (Rs)**	**+**	**Furniture (Rs)**		**Creditors (Rs)**	**+**	**(Rs)**
Old Balance	45,000	+	4,000		10,000			=	22,000		37,000
Current transaction	−12,000						+12,000				
New Balance	**33,000**	**+**	**4,000**	**+**	**10,000**	**+**	**12,000**	**=**	**22,000**	**+**	**37,000**

(f) Paid rent of Rs 3,500 and salary of Rs 4,500.

In the given transaction, Capital is decreasing due to expenses (or losses) incurred in the form of rent and salary with Rs 8,000 (i.e. 3,500 + 4,500). On the left hand side, asset in the form of cash is reducing due to expenses of Rs 8,000. As there is a simultaneous decrease on the Left Hand Side and Right Hand Side with Rs 8,000, therefore both the sides of the equation stand equal.

Particulars	**Assets**							**=**	**Liabilities**		**Capital**
	Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Debtors (Rs)**	**+**	**Furniture (Rs)**		**Creditors (Rs)**	**+**	**(Rs)**
Old Balance	33,000	+	4,000	+	10,000	+	12,000	=	22,000		37,000
Current transaction	−8,000										−3,500 (expense)
											−4,500 (expense)
New Balance	**25,000**	**+**	**4,000**	**+**	**10,000**	**+**	**12,000**	**=**	**22,000**	**+**	**29,000**

(g) Salary Outstanding of Rs 5,600.
In the given transaction, Capital is decreasing due to expense (or losses) incurred in the form of salary with Rs 5,600 on the Right Hand Side and on the same side liability is increasing in the form of Salary Outstanding with the same amount. As there is a simultaneous increase and decrease on the same side (right hand side), therefore, both the sides of the equation stand equal.

Particulars	**Assets**							**=**	**Liabilities**				**Capital**
	Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Debtors (Rs)**	**+**	**Furniture (Rs)**		**Creditors (Rs)**	**+**	**Salary Outstanding (Rs)**	**+**	**(Rs)**
	25,000	+	4,000	+	10,000	+	12,000	=	22,000				29,000
Current transaction											5,600		−5,600 (Salary)
New Balance	**25,000**	**+**	**4,000**	**+**	**10,000**	**+**	**12,000**	**=**	**22,000**		**5,600**	**+**	**23,400**

(h) Withdrawn Cash of Rs 6,500 and goods of Rs 1,500 for personal use.
In the given transaction, on the left hand side Assets in the form of cash and stock is decreasing with Rs 6,500 and Rs 1,500 respectively. Whereas, on the right hand side Capital is decreasing due to effect of drawings made with Rs 8,000

(i.e. 6,500 + 1,500). As there is a simultaneous decrease on the Left Hand Side and Right Hand Side with Rs 8,000, so both the sides of the equation stand equal.

Particulars	Assets							=	Liabilities				Capital
	Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Debtors (Rs)**	**+**	**Furniture (Rs)**		**Creditors (Rs)**	**+**	**Salary Outstanding (Rs)**	**+**	**(Rs)**
Old Balance	25,000	+	4,000	+	10,000	+	12,000	=	22,000	+	5,600	+	23,400
Current transaction	−6,500	+	−1,500										−8,000 (Drawings)
New Balance	**18,500**	**+**	**2,500**	**+**	**10,000**	**+**	**12,000**	**=**	**22,000**		**5,600**	**+**	**15,400**

Example 1 Adil Traders started business with cash of Rs 35,000. For his business, following transactions are to be recorded.

(i) Purchased goods of Rs 30,000 on credit.

(ii) Paid rent of Rs 8,000.

(iii) Withdrawn Rs 5,000 for paying his son's school fees.

(iv) Purchased chairs for office use Rs 3,000.

(v) Sold goods costing Rs 1,750 for Rs 2,250.

(vi) Interest on drawings charged @ 10%

Prepare Accounting Equation.
Solution

S.No.	Transactions	Assets					=	Liabilities	+	Capital
		Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Furniture (Rs)**	**=**	**Creditors (Rs)**		**(Rs)**
	Started business with cash	35,000					=			35,000
		35,000					=			35,000
(i)	Purchased goods on credit		+	30,000			=	30,000		
		35,000	+	30,000			=	30,000	+	35,000
(ii)	Paid rent	−8,000					=			−8,000

										(rent)
		27,000	+	30,000			=	30,000	+	27,000
(iii)	Withdrawn cash for paying son's school fees	−5,000								−5,000
		22,000	+	30,000			=	30,000	+	22,000
(iv)	Purchase chairs for office use	−3,000			+	3,000	=			
		19,000	+	30,000	+	3,000	=	30,000	+	22,000
(v)	Sold goods costing Rs 1,750 for Rs 2,250	2,250	+	−1,750					+	500 (profit)
		21,250	+	28,250	+	3,000	=	30,000	+	22,500
(vi)	Interest on drawings @ 10%									−500 (Expense for Proprietor)
										+500 (Gain for Business)
		21,250	+	28,250	+	3,000	=	30,000	+	22,500

Total Assets	**=**	**Liabilities**	**+**	**Capital**
Cash + Stock + Furniture	**=**	Creditors	**+**	Capital
21,250+28,250+3,000	**=**	30,000	**+**	22,500
52,500	**=**	30,000	**+**	22,500

Example 2 Randeep started business with cash of Rs 60,000. Following transactions occurred during the year.

(i) Purchased goods of Rs 20,000 from Vikrant in cash.

(ii) Sold goods to Kapil costing Rs 4,200 at a loss of Rs 600 in cash.

(iii) Sold goods on credit (costing Rs 3,000) at a profit of 20% on cost.

(iv) Deposited into Bank Rs 10,000.

(v) Commission Received of Rs 2,500.

(vi) Stationery purchased for Rs 350.

Prepare Accounting Equation.
Solution

S.No.	**Transactions**	**Assets**							**=**	**Liabilities**	**+**	**Capital**
		Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Debtors (Rs)**	**+**	**Bank (Rs)**	**=**			**(Rs)**
	Started business with cash	60,000							=			60,000
		60,000							=			60,000
(i)	Purchased goods for cash	−20,000	+	20,000					=			
		40,000	+	20,000					=			60,000
(ii)	Sold goods to Kapil costing Rs 4,200 at a loss of Rs 600 in cash.	3,600	+	−4,200					=			−600 (loss)
		43,600	+	15,800					=			59,400
(iii)	Sold goods on credit (costing Rs 3,000) at a profit of 20% on cost.		+	−3,000	+	3,600						+600 (profit)
		43,600	+	12,800	+	3,600			=			60,000
(iv)	Deposited Cash into the bank	−10,000					+	10,000	=			
		33,600	+	12,800	+	3,600	+	10,000	=			60,000
(v)	Commission Received	2,500										2,500 (income)
		36,100	+	12,800	+	3,600	+	10,000	=			62,500

(vi)	Stationery purchased	–350										–350 (Expenses)
		35,750	+	12,800	+	3,600	+	10,000	=			62,150

Total Assets	**=**	**Liabilities**	**+**	**Capital**
Cash + Stock +Debtors+ Bank	**=**		**+**	Capital
35,750+12,800+3,600+10,000	**=**	0	**+**	62,150
62,150	**=**	0	**+**	62,150

Example 3 From the following particulars of Laxman Sharma, Prepare accounting equation.

(i) Started business with Cash Rs 50,000, Building Rs 2,50,000 and Furniture Rs 15,000.

(ii) Took a bank loan of Rs 30,000.

(iii) Purchased goods of Rs 20,000 in cash and Rs 15,000 on credit.

(iv) Goods costing Rs 3,000 sold at 20% profit on cost.

(v) Sold 30% of goods at a profit of 25%.

(vi) Sold 20% of the remaining goods at a profit of 10%.

(vii) Introduced additional capital of Rs 20,000.

(viii) Commission of Rs 3,200 received in advance.

(ix) Received securities deposit of Rs 20,000 from tenants.

(x) Paid Life Insurance Premium of Rs 11,000.

Solution

S.No.	**Transactions**	**Assets**							**=**	**Liabilities**						
		Cash (Rs)	**+**	**Building (Rs)**	**+**	**Furniture (Rs)**	**+**	**Stock (Rs)**	**=**	**Bank Loan (Rs)**	**+**	**Creditors (Rs)**	**+**	**Commission Received in Advance (Rs)**	**+**	**Secu Depo (Rs)**
(i)	Started business with cash, building and furniture	50,000	+	2,50,000	+	15,000			=							

		50,000	+	2,50,000	+	15,000			=							
(ii)	Took a bank loan of Rs 30,000.	30,000							=	30,000						
		80,000	+	2,50,000	+	15,000			=	30,000	+					
(iii)	Purchased goods of Rs 20,000 in cash and Rs 15,000 in credit.	−20,000	+				+	35,000	=		+	15,000				
		60,000	+	2,50,000	+	15,000	+	35,000	=	30,000	+	15,000	+			
(iv)	Sold goods (costing Rs 3,000) at a profit of 20% on cost.	3,600	+				+	−3,000	=							
		63,600	+	2,50,000	+	15,000		32,000	=	30,000	+	15,000	+			
(v)	Sold 30% of goods at a profit of 25%. (9,600 × 1.25)	+12,000					+	−9,600	=				+			
		75,600	+	2,50,000	+	15,000	+	22,400	=	30,000	+	15,000				
(vi)	Sold 20% of the remaining goods at a profit of 10%. (4,480 × 1.10)	4,928					+	−4,480	=				+			
		80,528	+	2,50,000	+	15,000	+	17,920	=	30,000	+	15,000	+			
(vii)	Introduced additional capital of Rs 20,000.	20,000														
		1,00,528	+	2,50,000	+	15,000	+	17,920	=	30,000	+	15,000	+			
(viii)	Commission of Rs 3,200	3,200											+	3,200		

	received in advance.															
		1,03,728	+	2,50,000	+	15,000	+	17,920	=	30,000	+	15,000	+	3,200		
(ix)	Received securities deposits of Rs 20,000 from tenants.	20,000														20,00
		1,23,728	+	2,50,000	+	15,000	+	17,920	=	30,000	+	15,000	+	3,200	+	20,00
(x)	Paid Life Insurance Premium of Rs 11,000	−11,000														
		1,12,728	+	2,50,000	+	15,000	+	17,920	=	30,000	+	15,000	+	3,200	+	20,00

Total Assets	**=**	**Liabilities**	**+**	**Capital**
Cash + Building + Furniture + Stock	**=**	Bank Loan + Creditors + Commission Received in Advance + Security Deposits	**+**	Capital
1,12,728 + 2,50,000 + 15,000 + 17,920	**=**	30,000 + 15,000 + 3,200 + 20,000	**+**	3,27,448
3,95,648	**=**	68,200	**+**	3,27,448
3,95,648	=	3,95648		

Total Stock of Goods: 20,000 + 15,000 = 35,000

Sales:
Sold on Credit: 3,000
30% *Sold at profit of* 25%: 30% of 32,000 (35,000 – 3,000) = 9,600
20% *of remaining sold at profit of* 10%:20% of 22,400 (35,000 – 3,000 – 9,600) = 4,480

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Comprehensive Examples of Accounting Equation

Practical problems based on accounting equations.

Example 1 Fill in the blanks.

Case	Total Assets (Rs)	Equities		
		Internal (Rs)	External (Rs)	Total (Rs)
a	40,000	?	15,000	?
b	?	-	-	50,000
c	60,000	36,000	?	?
d	?	?	25,000	45,000

Solution

We know that, Assets = Capital + Liabilities.
Or Assets = Internal Equities + External Equities.

Case	Total Assets (Rs)	Equities		
		Internal (Rs)	External (Rs)	Total (Rs)
a	40,000	25,000	15,000	40,000
b	50,000	-	-	50,000
c	60,000	36,000	24,000	60,000
d	45,000	20,000	25,000	45,000

Example 2 Calculate the following.

(i) Capital of business is Rs 40,000 and Outsiders liabilities are Rs 22,000. Calculate total assets of the business.

(ii) Total Assets of business are Rs 2,50,000. Calculate creditors, if net worth is Rs 1,85,000.

(iii) Calculate owner's equity at the end of the period and also total equity from the given data.

Particulars	Amount (Rs)
Owner Equity in the beginning of the period Creditor's Equity at the end of the period Revenue during the period Expenses during the period	50,000 45,000 25,000 10,000

Solution

(i) Total Assets = Capital + Outside Liabilities

Total Assets = 40,000 + 22,000

= 62,000

(ii) Total Assets = Capital + Outside Liabilities

or Total Assets = Net Worth + Creditors

2,50,000 = 1,85,000 + Creditors

Creditors = 65,000

(iii) Owner's Equity at the end of the period = Opening Owner's Equity + Revenue earned during the period – Expenses incurred during the period

Owner's Equity at the end of the period = 50,000 + 25,000 – 10,000.= 65,000.

Total Equity = Owner's Equity + Creditor's Equity

Total Equity = 65,000 + 45,000

= 1,10,000

Example 3 With the help of accounting equation and the data given below, describe the possible transactions for the items (a) to (e).

S.No.	**Cash**	**+**	**Stock**	**+**	**Fixed Assets**	**=**	**Capital**	**+**	**Liabilities**
b/f	40,000	+	10,000	+	18,000	=	60,000	+	8,000
(a)	-	+	(+) 6,000		-	=	-	+	(+) 6,000
(b)	(-) 8,000	+	-	+	(+) 12,000	=	-	+	(+) 4,000
(c)	(+) 5,000		-	+	(-) 6,000	=	(-) 1,000	+	-
(d)	(+) 8,000	+	(-) 4,000	+	-	=	(+) 4,000	+	-
(e)	(-) 2,000	+	(+) 7,000	+	-	=	-	+	(+) 5,000

Solution:

In the above accounting equation, Cash Balance of Rs 40,000, Stock of Goods worth Rs 10,000, Fixed Assets of Rs 18,000, Capital of Rs 60,000 and Liabilities amounting to Rs 8,000 have been brought forward from previous year.
The transactions on the basis of accounting equation (Total Assets = Capital + Outside Liabilities) are as follows:

(a) Since stock is increasing by Rs 6,000, this means that goods have been purchased i.e. either on cash or on credit. At the same time as liabilities are increasing with the same amount i.e. Rs 6,000, it means these have been purchased on credit. So, the above transaction is for recording **"Goods purchased on credit worth Rs 6,000".**

(b) Here, fixed assets are increasing by Rs 12,000 with a simultaneous decrease in cash by Rs 8,000 and increase in liabilities by Rs 4,000. This means, fixed assets have been purchased with part payment of Rs 8,000 in cash and balance Rs 4,000 is our liability. Thus, **"Fixed Assets worth Rs 12,000 purchased, out of which Rs 8,000 is paid in cash".**

(c) In this transaction, cash of Rs 5,000 is being received with a reduction in fixed assets worth Rs 6,000. And at the same time, Rs 1,000 is being deducted from Capital. This means that Fixed Assets worth Rs 6,000 have been sold at a loss of Rs 1,000 i.e. for Rs 5,000. So, the transaction is, **"Fixed Assets worth Rs 6,000 sold for Rs 5,000".**

(d) The given accounting equation shows that cash is increasing by Rs 8,000 while stock is reduced by Rs 4,000 only. Also, capital is increasing by Rs 4,000. This means, Goods worth Rs 4,000 are being sold for Rs 8,000 i.e. at a profit of Rs 4,000 which is added to the capital. So, the transaction recorded above is, **"Goods of Rs 4,000 sold for Rs 8,000".**

(e) Here in the above equation, cash is decreasing by Rs 2,000, Stock is increasing by Rs 7,000 and at the same time Liabilities are increasing by Rs 5,000. This means that goods worth Rs 7,000 are being purchased and out of the sum due Rs 2,000 are paid in cash and Rs 5,000 are still payable. This means the transaction is, **"Goods worth Rs 2,000 are purchased in cash and Rs 5,000 on credit".**

Example 4 Prove that the accounting equation is satisfied in all the following transactions of Amit.

(a) Commenced business with cash Rs 9,00,000.

(b) Rent paid in advance Rs 8,000

(c) Purchased goods for cash Rs 4,00,000 and for credit Rs 1,00,000.

(d) Sold goods costing Rs 3,00,000, for cash Rs 3,50,000.

(e) Paid Salaries Rs 8000 and Salaries outstanding Rs 2,000.

(f) Bought Car for personal use Rs 1,40,000.

Solution:

Particulars	**Assets**					**=**	**Liabilities**			**+**	**Capital (Rs)**
	Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Rent paid in Advance (Rs)**		**Creditors (Rs)**	**+**	**Salaries O/S (Rs)**		
(a) Commenced business with Cash	9,00,000					=					9,00,000
(b) Rent paid in Advance Rs 8,000	(-)8,000	+	-	+	(+)8,000	=					-
New Balance	**8,92,000**	**+**		**+**	**8,000**	**=**				**+**	**9,00,000**

(c) Purchased goods for cash Rs 4,00,000 and on credit Rs 1,00,000	(-) 4,00,000	**+**	5,00,000	**+**	**-**	**=**	(+) 1,00,000	**+**	**-**	**+**	**-**
New Balance	**4,92,000**	**+**	**5,00,000**	**+**	**8,000**	**=**	**1,00,000**	**+**	**-**	**+**	**9,00,000**
(d) Sold goods costing Rs 3,00,000 for Rs 3,50,000	(+) 3,50,000	+	(-) 3,00,000	+	-	=	-	+	-	+	(+) 50,000
New Balance	**8,42,000**	**+**	**2,00,000**	**+**	**8,000**	**=**	**1,00,000**	**+**	**-**	**+**	**9,50,000**
(e) Paid Salaries Rs 8,000 and Salaries outstanding Rs 2,000	(-) 8,000	+	-	+	-	=	-	+	(+) 2,000	+	(-) 10,000
New Balance	**8,34,000**	**+**	**2,00,000**	**+**	**8,000**	**=**	**1,00,000**	**+**	**2,000**	**+**	**9,40,000**
(f) Purchased Car for personal use Rs 1,40,000	(-) 1,40,000	+	-	+	-	=	-	+	-	+	(-) 1,40,000
New Balance	**6,94,000**	**+**	**2,00,000**	**+**	**8,000**	**=**	**1,00,000**	**+**	**2,000**	**+**	**8,00,000**

Here

Total Assets	**=**	**Liabilities**	**+**	**Capital**
Cash + Stock + Rent paid in Advance	**=**	Creditors + Salaries outstanding	**+**	Capital
6,94,000 + 2,00,000 + 8,000	**=**	1,00,000 + 2,000	**+**	8,00,000
9,02,000	**=**	1,02,000	**+**	8,00,000
9,02,000	=	9,02,000		

So, Total Assets = Capital + Outside Liabilities

Hence, accounting equation is satisfied.

Example 5 Find the missing figures from the entries given below on the basis of accounting equation.

(a) Cash Rs 28,000, Loan from Ajit Rs 12,000, Machinery Rs 40,000, Goodwill Rs 5,000 and Capital Rs ?

(b) Capital Rs 90,000, Loan to Mr. PQR Rs 8,000, Bank O/D Rs 5,000, Machinery Rs 60,000, Debtors Rs 7,000 and Cash Rs ?

(c) Trade Creditors Rs 22,000, Advances given Rs 5,000, Prepaid Expenses Rs 2,000, Investment Rs 15,000, Reserves Rs 10,000, Cash Rs 21,000, Fixed Assets Rs 40,000 and Capital Rs ?

(d) Sundry Debtors Rs 19,000, Closing Stock Rs 10,000, Trademarks Rs 8,000, Outstanding expenses Rs 4,000, Loan Rs 10,000, Cash Rs 22,000 and Capital Rs ?

Solution:
We know that Accounting Equation is
Assets = Liabilities + Capital
Now, considering the above four cases one by one,

(a) Assets = Cash + Machinery + Goodwill

= 28,000 + 40,000 + 5,000
= 73,000

Liabilities = Loan from Ajit = Rs 12,000

And, As Assets= Liabilities + Capital

Capital = Assets – Liabilities
i.e. **Capital** = 73,000 – 12,000
= **61,000**

So, Capital is Rs 61,000

(b) Assets = Loan to Mr. PQR + Machinery + Debtors + Cash

= 8,000 + 60,000 + 7,000 + Cash
= 75,000 + Cash

Liabilities = Bank O/D = Rs 5,000
Capital = Rs 90,000
Now, Assets= Liabilities + Capital
75,000 + Cash = 5,000 + 90,000
Cash = (95,000 – 75,000)
Cash = Rs 20,000

(c) Assets = Advance given + Prepaid Expenses + Investments + Cash + Fixed Assets

= 5,000 + 2,000 + 15,000 + 21,000 + 40,000
= 83,000
Liabilities = Reserves + Trade creditors
= 10,000 + 22,000
= 32,000
Now, Assets= Liabilities + Capital
Capital = Assets – Liabilities
= 83,000 – 32,000
= 51,000
So, **Capital is Rs 51,000**

(d) Assets = Sundry Debtors + Closing Stock + Trademarks + Cash

= 19,000 + 10,000 + 8,000 + 22,000
= 59,000
Liabilities = Outstanding expenses + Loan
= 4,000 + 10,000

= 14,000
Capital = Assets – Liabilities
= 59,000 – 14000
= 45,000
So, **Capital is Rs 45,000**

Example 6 Show the effect of the following transactions on the accounting equations.

(a) MN Ltd. started business with

1. i) Cash Rs 3,40,000
   ii) Goods Rs 1,50,000
   iii) Building Rs 3,00,000

(b) They Purchased goods for cash Rs 80,000
(c) Sold goods (costing Rs 56,000) for Rs 75,000.
(d) Sold goods to Manoj (Costing Rs 18,000) for Rs 25,000
(e) Purchased goods from Sohan Rs 35,000
(f) Paid cash to Sohan in full settlement Rs 33,000
(g) Rent Outstanding Rs 8,000
(h) Depreciation charged on Building Rs 7,500
(i) Fresh capital Invested Rs 40,000
(j) Prepaid Insurance Rs 2,500

Solution:

Particulars	**Assets**									**=**	**Liabilities**			**+**	**Capital**
	Cash (Rs)	**+**	**Stock (Rs)**	**+**	**Building (Rs)**	**+**	**Debtors (Rs)**	**+**	**Prepaid Expenses (Rs)**		**Creditors (Rs)**	**+**	**Outstanding Expenses (Rs)**		**(Rs)**
(a) Commenced business	3,40,000	+	1,50,000	+	3,00,000					=	-	+	-	+	7,90,00
(b) Goods Purchased for cash	(-) 80,000	+	(+) 80,000							=					-
New Balance	**2,60,000**	**+**	**2,30,000**	**+**	**3,00,000**	**+**	**-**	**+**	**-**	**=**	**-**	**+**	**-**	**+**	**7,90,00**
(c) Sold goods costing 56,000 for 75,000	(+) 75,000	+	(-) 56,000	+	-	+	-	+	-	=	-	+	-	+	(+) 19,000
New Balance	**3,35,000**	**+**	**1,74,000**	**+**	**3,00,000**	**+**	**-**	**+**	**-**	**=**	**-**	**+**	**-**	**+**	**8,09,00**

(d) Sold Goods to Manoj (costing Rs 18,000) for Rs 25,000		**+**	(-) 18,000	+		+	25,000	+		=		+		+	(+) 7,00
New Balance	**3,35,000**	**+**	**1,56,000**	**+**	**3,00,000**	**+**	**25,000**	**+**	**-**	**=**	**-**	**+**	**-**	**+**	**8,16,00**
(e) Purchased goods from Sohan		+	(+) 35,000	+		+		+		=	(+) 35,000	+		+	
New Balance	**3,35,000**	**+**	**1,91,000**	**+**	**3,00,000**	**+**	**25,000**	**+**	**-**	**=**	**35,000**	**+**	**-**	**+**	**8,16,00**
(f) Paid Cash to Sohan in full settlement Rs 33,000	(-) 33,000	+								=	(-) 35,000	+	-	+	(+) 2,00
New Balance	**3,02,000**	**+**	**1,91,000**	**+**	**3,00,000**	**+**	**25,000**	**+**	**-**	**=**	**0**	**+**	**-**	**+**	**8,18,00**
(g) Rent Outstanding Rs 8,000		+		+		+		+		=		+	(+) 8,000	+	(-) 8,00
New Balance	**3,02,000**	**+**	**1,91,000**	**+**	**3,00,000**	**+**	**25,000**	**+**	**-**	**=**	**0**	**+**	**8,000**	**+**	**8,10,00**
(h) Depreciation charged on building Rs 7,500		+		+	(-) 7,500	+		+		=		+		+	(-) 7,50
New	**3,02,000**	**+**	**1,91,000**	**+**	**2,92,500**	**+**	**25,000**	**+**	**-**	**=**	**0**	**+**	**8,000**	**+**	**8,02,50**

Balance															
(i) Fresh Capital invested Rs 40,000	(+) 40,000	+		+		+		+		=		+		+	(+) 40,000
New Balance	**3,42,000**	**+**	**1,91,000**	**+**	**2,92,500**	**+**	**25,000**	**+**	**-**	**=**	**0**	**+**	**8,000**	**+**	**8,42,50**
(j) Prepaid Insurance Rs 2,500	(-) 2,500	+		+		+		+	(+) 2,500	=		+		+	
New Balance	**3,39,500**	**+**	**1,91,000**	**+**	**2,92,500**	**+**	**25,000**	**+**	**2,500**	**=**	**0**	**+**	**8,000**	**+**	**8,42,50**

In the above Equation,

Total Assets	**=**	**Liabilities**	**+**	**Capital**
Cash + Stock + Building + Debtors + Prepaid expenses	**=**	Creditors + Outstanding Expenses	**+**	Capital
3,39,500+1,91,000+2,92,500+25,000+2,500	**=**	0 + 8,000	**+**	8,42,500
8,50,500	**=**	8,000	**+**	8,42,500
8,50,500	=	8,50,500		

So, Assets = Liabilities + Capital, i.e. Accounting Equation is satisfied.