

THE ACCOUNTING EQUATION AND TRANSACTIONS

Key Topics to Know

Accounting Equation and Components:

- Three basic elements: Assets, Liabilities, Stockholders Equity
- Stockholders' Equity = Retained Earnings + Common Stock
- Retained earnings = Revenues - Expenses - Dividends
- The accounting equation must always balance

Components of Stockholders equity:

- Revenues and expenses
- Dividends
- Retained earnings
- Common stock

Business Transactions:

- Impact on the accounting equation
- Impact on accounts and financial statements

Double-entry accounting:

- Debits and Credits
- Total debits must always equal total credits

Accounting Books:

- Chart of Accounts
- General Journal
- General Ledger (T account)

Accounting Transactions

- Journalizing (Recording) transactions in the General Journal
- Posting (Recording) Transactions from the General Journal in the General Ledger

Trial Balance:

- Prepare a Trial Balance
- Use the trial balance to prepare financial statements
- Find and correct errors using the trial balance

Practice Problems

Problem #1 - Accounting Equation

At the end of its prior fiscal year, December 31, M Company has assets of \$300,000 and liabilities of \$175,000.

- Required:
- a) What is owner's equity at the start of the current fiscal year?
 - b) What is owner's equity at the end of the current year, if assets increased by \$85,000, liabilities increased by \$35,000?
 - c) What is the increase or (decrease) in owner's equity for the year?
 - d) What is the net income (or net loss) for the year assuming there were no additional investments and dividends of \$15,000 were paid.

Problem #2 - Changes in owner's equity

H Company reported the following information for the year. During the year, an additional \$25,000 of capital stock was issued and no dividends were paid.

	Total Assets	Total Liabilities
Beginning of the year	\$500,000	\$200,000
End of the year	\$625,000	\$250,000

- Required: Determine the net income (or net loss) for the year.

Problem #3 - Changes in owner's equity

T Company's balance sheet reported the following total assets and total liabilities for the year. During the year, an additional \$70,000 of capital stock was issued and \$45,000 of dividends were paid.

	Total Assets	Total Liabilities
Beginning of the year	\$625,000	\$255,000
End of the year	\$640,000	\$385,000

- Required: Determine the net income (or net loss) for the year.

Problem #4 – Debits and Credits

Following is a list common accounting transactions.

- a) The right side of an account is the _____ side.
- b) Asset accounts are increased by a _____.
- c) Liability accounts are decreased by a _____.
- d) Expense accounts are increased by a _____.
- e) The left side of an account is the _____ side.
- f) Revenue accounts are increased by a _____.
- g) Owner's equity is increased by a _____.
- h) The normal balance of an asset account is a _____.
- i) The normal balance of a liability account is a _____.
- j) The normal balance of the common stock account is a _____.
- k) The normal balance of the retained earnings account is a _____.
- l) The normal balance of revenue account is a _____.
- m) The normal balance of an expense account is a _____.
- n) The cash account is increased by a _____.
- o) The accounts payable account is increased by a _____.
- p) The dividend account is increased by a _____.
- q) The accounts receivable account is decreased by a _____.
- r) The common stock account is increased by a _____.
- s) The retained earnings account is decreased by a _____.
- t) The equipment account is increased by a _____.
- u) The sum of the debits must be _____ to the sum of the credits.

Required: Fill in the blanks with the word Debit or Credit

Problem #5 – Business Transactions

Following is a list of common transactions.

- a) Received cash for common stock
- b) Purchased supplies for cash
- c) Purchased equipment on account
- d) Billed customers for services on account
- e) Paid creditor on account
- f) Received cash from customers billed on account
- g) Paid rent for the month
- h) Received payment for services from cash customers
- i) Paid cash dividends

Each of the transactions will affect the accounting equation in one of the following ways:

- 1. an increase in an asset and an increase in a liability
- 2. an increase in a asset and an increase in owner's equity
- 3. an increase in an asset and a decrease in another asset
- 4. a decrease in an asset and a decrease in a liability
- 5. a decrease in an asset and a decrease in owner's equity

Required: For each transaction, select the proper effect on the accounting equation.

Problem #6 – Debits and Credits

Following is a list common accounting transactions.

- a) Issuance of common stock to a shareholder for cash.
- b) Payment of rent for the current month.
- c) Purchase of supplies on account.
- d) Payment to a creditor on account.
- e) Fees earned and billed to customers.
- f) Receipt of cash from customers previously billed on account.
- g) Payment of cash dividends to stockholders.
- h) Payment for a 3-year insurance policy.
- i) Incurred utilities expenses.
- j) Receipt of cash for services to be provided in the future.

Required: For each transaction, determine the account(s) to be debited and credited.

Problem #7 - Retained Earnings

As of January 1, the C Company's retained earnings account had a credit balance of \$100,500. During the year, net income was \$58,500 and dividends of \$32,000 were paid.

Required: What is the balance of the retained earnings account at December 31?

Problem #8 – Financial Statements

O Company had the following as of September 30, the first month of business. All account balances are normal balances.

Accounts Payable	\$500
Rent Expense	1,000
Cash	10,025
Fees earned	16,500
Auto expense	1,350
Accounts receivable	5,350
Salaries expense	2,500
Supplies	1,275
Capital stock	10,000
Miscellaneous expense	150
Dividends	5,000
Supplies expense	350

Required: Complete the following financial statements for the O Company.

O Company
Income Statement
Month Ended September 30

Fees Earned		\$
Operating Expenses:		
Auto expense	\$	
Salaries expense		
Supplies expense		
Rent expense		
Miscellaneous expense		
Total Operating Expenses		
Net Income		\$

O Company
Statement of Retained Earnings
Month Ended September 30

Net Income for September		\$
less: Dividends		
Retained Earnings September 30, 2008		\$

O Company
Balance Sheet
September 30

	<u>Assets</u>			<u>Liabilities</u>	
Cash	\$			Accounts Payable	\$
Accounts Receivable					
Supplies				Stockholders' Equity	
				Capital Stock	
				Retained Earnings	
				Total Liabilities and	
Total Assets	\$			Stockholders' Equity	\$

Multiple Choice Questions

1. The following statements pertain to recording transactions. Which statement(s) are true?
 - I. Total debits should equal total credits.
 - II. It is possible to have multiple debits or credits in one journal entry.
 - III. Assets are always listed first in journal entries.
 - IV. Some journal entries will have debits only.
 - a) I only.
 - b) I and II.
 - c) I, II, and IV.
 - d) II, III, and IV.

2. Which of the following is/are true about a "credit"?
 - I. It is part of the double-entry procedure that keeps the accounting equation in balance.
 - II. It represents a decrease to assets.
 - III. It represents an increase to liabilities.
 - IV. It is on the right side of a T-account.
 - a) I and II.
 - b) IV only.
 - c) I, II, and III.
 - d) I, II, III, and IV.

3. Which of the accounts are increased with a debit and decreased with a credit?
 - a) Liabilities, stockholders' equity, and revenues.
 - b) Dividends, liabilities, and assets.
 - c) Expenses, dividends, and stockholders' equity.
 - d) Assets, dividends, and expenses.

4. Retained earnings at the end of the year is calculated using:
 - a) Beginning retained earnings, net income, and dividends.
 - b) Common stock and dividends.
 - c) Stockholders' equity, net income, and dividends.
 - d) Net income and dividends.

5. For the past five years, W Company reported the following annual net income and dividend amounts:

<u>Year</u>	<u>Net Income</u>	<u>Dividends</u>
1	\$22,000	\$2,000
2	17,000	2,000
3	9,000	1,000
4	14,000	3,000
5	25,000	4,000

If W Company had Retained Earnings of \$88,000 at the end of year 5, what was Retained Earnings at the beginning of Year 1?

- a) \$13,000.
b) \$25,000.
c) \$7,000.
d) \$1,000.
6. When cash payments are made to stockholders, what is the effect on the company's accounts?
- a) Cash decreases and dividends increase.
b) Cash increases and dividends decrease.
c) Cash decreases and common stock decreases.
d) Cash increases and common stock increases.
7. Which of the following would increase both assets and liabilities?
- a) Provide services to customers on account.
b) Purchase office supplies on account.
c) Pay dividends to stockholders.
d) Received a utility bill but do not pay for it.
8. How does purchasing supplies for cash effect the accounting equation?
- a) Increase assets.
b) Decrease stockholders' equity.
c) Decrease liabilities.
d) No effect.
9. Accounts with normal credit balances include:
- a) Assets and liabilities
b) Revenues and expenses
c) Liabilities and revenues
d) Revenues and assets

10. The process of transferring entries from the journal to the ledger is called:
 - a) Journalizing
 - b) Transferring
 - c) Posting
 - d) Balancing

11. The chart of accounts lists a company's accounts in what order?
 - a) Assets, liabilities, revenues, expenses, stockholders' equity
 - b) Assets, revenues, expenses, liabilities, stockholders' equity
 - c) Assets, liabilities, stockholders' equity, expenses, revenue
 - d) Assets, liabilities, stockholders' equity, revenues, expenses

12. When a trial balance balances, it is an indication that:
 - a) All journal entries have been posted.
 - b) The account balances are correct.
 - c) Debits equal credits.
 - d) All transactions have been journalized.

13. Accounts are listed on the trial balance in:
 - a) Chronological order
 - b) The order that they appear in the ledger
 - c) Alphabetical order
 - d) The order in which they are posted

14. An account balance is:
 - a) The total of the credit side of the account.
 - b) The total of the debit side of the account.
 - c) The difference between the total debits and total credits for an account including the beginning balance.
 - d) The sum of the total debits and total credits for an account including the beginning balance.

15. Steps to uncover an error in the Trial Balance include:
 - a) Verify debits are equal to credits for each transaction.
 - b) Recompute each account balance.
 - c) Verify that all balances were correctly entered on the Trial Balance.
 - d) All of the above

Solutions to Problems

Problem #1 - Accounting Equation

- a) Owner's equity at the end of the prior year is \$125,000
 (\$300,000 - 175,000 = \$125,000)
- b) Owner's equity at the end of the current year is:
 Prior year: $300,000 - 175,000 = 125,000$
 Change during the year: $\frac{+85,000 - 35,000}{=} = 50,000$
 Current year: $385,000 - 210,000 = 175,000$
- c) The increase in owner's equity is \$50,000
- d) Net Income - Dividends = Increase in Owner's Equity
 Net Income - \$15,000 = \$50,000
 Net Income = \$65,000

Problem #2 - Changes in owner's equity

	<u>Assets</u> -	<u>Liabilities</u> =	<u>Owner's Equity</u>
Beginning of the year	\$500,000	\$200,000	\$300,000
End of the year	625,000	250,000	375,000
Increase in Owner' Equity			\$ 75,000
Increase in owners' equity	\$75,000		
less: Stock issued	25,000		
plus: Dividends	0		
= Net Income	\$50,000		

Problem #3 - Changes in owner's equity

	<u>Assets</u>	-	<u>Liabilities</u>	=	<u>Owner's Equity</u>
Beginning of the year	\$625,000	-	\$255,000	=	\$370,000
End of the year	\$640,000	-	\$385,000	=	\$255,000
Decrease in Owner' Equity					\$ (115,000)

Net Income (net loss) + Additional Investment - Dividends = Change in Owner's Equity

Net Income (net loss) + \$70,000 - \$45,000 = (\$115,000)

Net Loss = \$140,000

Problem #4 – Debits and Credits

- a) The right side of an account is the **credit** side.
- b) Asset accounts are increased by a **debit**.
- c) Liability accounts are decreased by a **debit**.
- d) Expense accounts are increased by a **debit**.
- e) The left side of an account is the **debit** side.
- f) Revenue accounts are increased by a **credit**.
- g) Owner's equity is increased by a **credit**.
- h) The normal balance of an asset account is a **debit**.
- i) The normal balance of a liability account is a **credit**.
- j) The normal balance of the common stock account is a **credit**.
- k) The normal balance of the retained earnings account is a **credit**.
- l) The normal balance of revenue account is a **credit**.
- m) The normal balance of an expense account is a **debit**.
- n) The cash account is increased by a **debit**.
- o) The accounts payable account is increased by a **credit**.
- p) The dividend account is increased by a **debit**.
- q) The accounts receivable account is decreased by a **credit**.
- r) The common stock account is increased by a **credit**.
- s) The retained earnings account is decreased by a **debit**.
- t) The equipment account is increased by a **debit**.
- u) The sum of the debits must be **equal** to the sum of the credits.

Problem #5 – Business Transactions

- | | |
|--|---|
| a) Received cash for common stock | 2. increase in an asset and increase in owner's equity |
| b) Purchased supplies for cash | 3. increase in an asset and decrease in another asset |
| c) Purchased equipment on account | 1. increase in an asset and increase in a liability |
| d) Billed customers for services on account | 2. increase in a asset and increase in owner's equity |
| e) Paid creditor on account | 4. decrease in an asset and decrease in a liability |
| f) Received cash from customers on account | 3. increase in an asset and decrease in another asset |
| g) Paid rent for the month | 5. decrease in an asset and decrease in owner's equity |
| h) Received payment for services from cash customers | 2. increase in an asset and increase in owner's equity |
| i) Paid cash dividends | 5. decrease in an asset and decrease in owner's equity |

Problem #6 – Debits and Credits

a.	Cash	Debit	
	Common Stock		Credit
b.	Rent Expense	Debit	
	Cash		Credit
c.	Supplies	Debit	
	Accounts Payable		Credit
d.	Accounts Payable	Debit	
	Cash		Credit
e.	Accounts Receivable	Debit	
	Fees Earned		Credit
f.	Cash	Debit	
	Accounts Receivable		Credit
g.	Dividends	Debit	
	Cash		Credit
h.	Prepaid Insurance	Debit	
	Cash		Credit
i.	Utilities Expense	Debit	
	A/P		Credit
j.	Cash	Debit	
	Unearned Fees		Credit

Problem #7 - Retained Earnings

The balance of the retained earnings account at December 31, is \$127,000.

Balance January 1	\$100,500
Net Income	58,500
Dividends	32,000
Balance December 31	<u><u>\$127,000</u></u>

Problem #8 - Financial statements

O Company
Income Statement
Month Ended September 30

Fees Earned		\$16,500
Operating Expenses:		
Auto expense	\$1,350	
Salaries expense	2,500	
Supplies expense	350	
Rent expense	1,000	
Miscellaneous expense	150	
Total Operating Expenses	5,350	
Net Income		\$11,150

O Company
Statement of Retained Earnings
Month Ended September 30

Net Income for September		\$11,150
less: Dividends		5,000
Retained Earnings September 30, 2008		\$6,150

O Company
Balance Sheet
September 30

	<u>Assets</u>		<u>Liabilities</u>
Cash	\$10,025	Accounts Payable	\$500
Accounts Receivable	5,350		
Supplies	1,275		
		<u>Stockholders' Equity</u>	
		Capital Stock	10,000
		Retained Earnings	6,150
		Total Liabilities and	
Total Assets	\$16,650	Stockholders' Equity	\$16,650

Solutions to Multiple Choice Questions

- | | |
|-----|---|
| 1. | B |
| 2. | D |
| 3. | D |
| 4. | A |
| 5. | A |
| 6. | A |
| 7. | B |
| 8. | D |
| 9. | C |
| 10. | C |
| 11. | D |
| 12. | C |
| 13. | B |
| 14. | C |
| 15. | D |