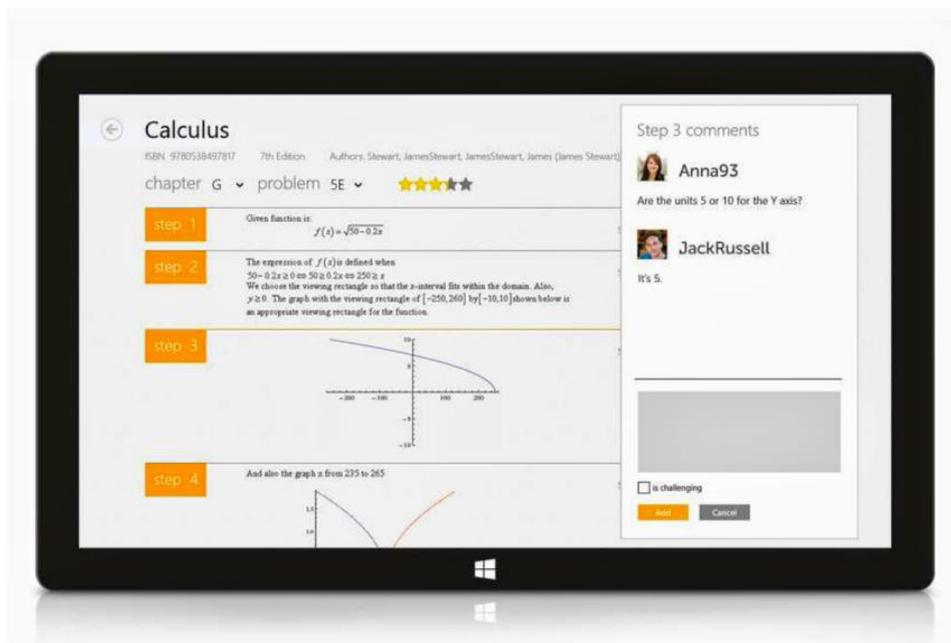


# Solution Authoring Guidelines

Version 9.4  
September 2016

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## Subject-specific Guidelines- Accounting

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## AC1. Content:

### A. Text:

**Interpretation:** For simple application based questions (Q-series and BE series in most textbooks), first interpret the question in simple sentences.

For advanced Case study based on applications (mostly CMA or CPA adapted):

- Write the **essence** of the whole case in one or two brief sentences.
- Support the statement with relevant **adequate explanation in your own words**.
- Write each point separately using bullet-points.

#### Example of essence:

The ethical issue in this case is gross misrepresentation of facts.

#### Example of **Adequate Explanation:**

- The bank in the first place had rejected the owner's application for loan due to the negative cash flows from operations.
- The sale of Accounts Receivables and liquidation of raw materials inventory are not the regular operations of the company.
- However, showing these as sources of cash on the operating section of the statement of cash flows might lead the bank into believing that the company is performing very well, whereas the company has multiple problems.
- Liquidation of raw materials inventory might cause problems in the production process.

#### Example of **Outcome:**

Misrepresenting facts in addition to being an ethical issue is not the solution to the acute cash crunch that the company is experiencing at the moment. The company should instead brainstorm on how to increase sales and cut down on expenditure.

## B. Equations:

Use MathType or Microsoft Equation 3.0 available in Word 2007/2010.

Precede the formula/equation with a sentence to bring on the context.

### Example:

Calculate the Depreciation expense.

$\begin{aligned} \text{Depreciation expense on sales equipment} &= \frac{\text{Cost of equipment}}{\text{Life of the equipment}} \\ &= \frac{\$64,800}{10} \\ &= \$6,480 \end{aligned}$
---

## C. Table:

- Excel is highly recommended for problems that require journalizing, T-Accounts, Statement of Cash Flows, Income Statement, Balance Sheets, etc.
- All the tables present in word file should be in image format. The tables should be given in editable format in excels and these excels need to be named with the same filename of the respective word file.

### Journal Entries: Best Practices

- Precede the journal entries with the logic of the problem preferably using an accounting equation
- Always make the journal entries using readymade Excel tables
- Name each column in a journal distinctly
- Make the Debit items appear clear and distinct from the Credit items
- Give a brief narration of the transactions. This narration could be in Italics (depending upon the textbook style)
- Make the amounts appear neatly right-aligned (or center-aligned)
- Use thousands separators for all the amounts
- Leave empty lines between journal entries for clarity
- Make a clear mention about transactions that need only Memorandum entries, i.e., transactions that do not need Journal entries

- For a problem involving a large number of journal entries, keep 4-5 entries in a single step preceded by adequate explanation

**Example** of a student friendly Journal entries solution:

Look out for the cost driver, since **it is the cost driver that determines** the amount of overhead to be applied to each department.

For the Tanning Department, it is **the square feet of leather** used as cost driver.

$$\begin{aligned} \text{Overhead applied} &= \text{Square feet of leather used} \times \text{Pre-determined overhead rate per} \\ &\quad \text{square foot} \times \text{No. of sets produced} \\ &= 100 \times 3 \times 20 \\ &= \$6,000 \end{aligned}$$

Now make the journal entry for the overhead applied to the Tanning Department.

<b>General Journal</b>				
<b>Date</b>	<b>Account Title and Explanation</b>	<b>Post. Ref.</b>	<b>Debit (\$)</b>	<b>Credit (\$)</b>
	Work-in-Process Inventory – Tanning Department		6,000	
	Manufacturing Overhead			6,000
	<i>(To record the manufacturing overhead applied to Tanning Department)</i>			

Explanation: The Work-in-Process Inventory is an asset and its balance is increasing, so it is debited. The manufacturing overhead is an expense account and its balance is decreasing, so it is credited.

**Important points to note in the table:**

- The contents of the table header should be aligned horizontally and vertically
- The font used in the table header should be in bold.
- Leave enough space (Preferably one inch) before writing the credit item of account title.
- Narration of the transaction is a must for each entry, even though it is not mentioned in the text.
- Explanation for each journal entry must be provided.

### Don'ts in Journal Entries:

- Showing the Journal entries without any **calculation** for any Debit/Credit items.
- Making Journal entries using the tab key on the keyboard
- Leaving **columns unnamed**.
- Mixing the Debit and Credit items.

**Example:**

Cash (Difference) \$439,300

Finance charge expense \$10,800

Liability – Financial Arrangement \$450,000

### T-Accounts – Best Practices:

- Use the table format for T-Accounts.
- Always follow the “Balance column account” format for T-Accounts or the format specific to a textbook.
- Name each column distinctly.
- Separate each T-Account with a step delimiter.

Account Name: Cash			Account No: 101		
Date	Explanation	Journ. Ref.	Debit \$	Credit \$	Balance Debit / (Credit) \$
1-Dec	Balance				10,000
1-Dec	Owner's Capital	G1	20,000		30,000
2-Dec	Supplies	G3		2,500	27,500
3-Dec	Equipment	G2		7,500	20,000

**Explanation:** Cash comes under the assets section of the accounting equation therefore, a debit increases the cash account balance and a credit decreases the cash account balance.

**Important points to note in the table:**

- The contents of the table header should be aligned horizontally and vertically
- The font used in the table header should be in bold
- Align the text to the left side
- Align the amounts to the right side

**T-Accounts - Avoid**

- Do not simply draw the T-Account.

**Example :**

<b>Cash 101</b>	
10,000	
<b>Owner's Capital 301</b>	
10,000	

- **Always use the Multiple Step format until and unless a specific format is mentioned in the problem.**
  - The period of the income statement should always appear as follows:  
“For the year ending December 31, 2012”.
- This also depends upon the textbook’s style.
- The amounts should appear neatly right-aligned and with thousands separators (commas separating numbers at the thousands place).
  - Calculations for Expenses/Revenue should always precede the Income Statement.

**Example:**

Calculate the depreciation expense.

$  \begin{aligned}  \text{Depreciation Expense on Sales Equipment} &= \frac{\text{Cost of Equipment}}{\text{Life of the Equipment}} \\  &= \frac{\$64,800}{10} \\  &= \$6,480  \end{aligned}  $
$  \begin{aligned}  \text{Depreciation Expense on Office Furniture} &= \frac{\text{Cost of Furniture}}{\text{Life of Furniture}} \\  &= \frac{\$39,600}{10} \\  &= \$3,960  \end{aligned}  $

- Income Statement should always contain information regarding Earning Per Share.
- Notes to Income Statement should appear on the face of the Income Statement.  
*Remember the Notes to Income Statement should not be confused with Working Notes.*
- A single line (a totaling rule) should always be placed under the column of figures to be added or subtracted.
- Always use double underline to highlight the final sums.

**Example:**

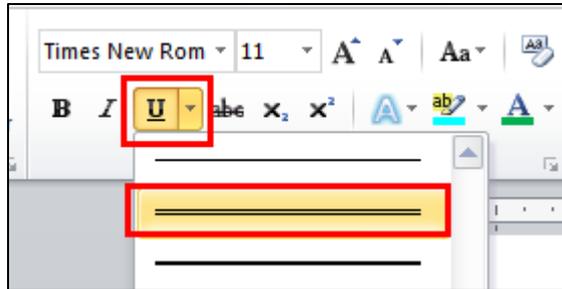
**Multiple-Step Form**

XYZ Company Statement of Income For the year ended December 31, 2007			
Particulars	Amount (\$)	Amount (\$)	Amount (\$)
Sales			96,500
<b>Less:</b> Cost of goods sold			<u>(60,570)</u>
<b>Gross profit</b>			<b>35,930</b>
<b>Operating expenses:</b>			
Selling expenses:			
Transportation out	2,690		
Sale commissions	7,980		
Depreciation expense on sales equipment	<u>6,480</u>	17,150	
Administrative expenses:			
Officers' salaries	4,900		
Depreciation expense - Furniture & Equipment	<u>3,960</u>	8,860	<u>(26,010)</u>
<b>Operating income</b>			<b>9,920</b>
<b>Other revenue:</b>			
Rental revenue			17,230
<b>Other expenses:</b>			
Interest expenses			<u>(1,860)</u>
<b>Income before taxes</b>			<b>25,290</b>
<b>Less:</b> Taxes			<u>(9,070)</u>
<b>Net income after taxes</b>			<b><u>16,220</u></b>
Earnings per share	$\left[ \begin{array}{r} \$16,220 \\ \hline 40,550 \end{array} \right]$		\$0.40
Note: Straight line method of depreciation is used for both office furniture and sales equipment.			

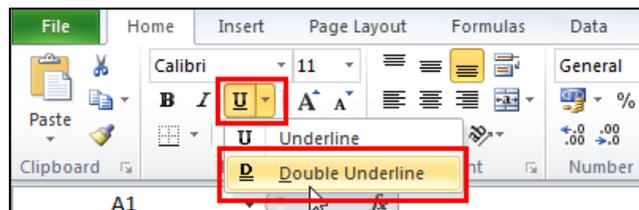
**Balance Sheet:**

- Balance Sheet should be prepared using only tables and should be prepared in the vertical classified form. The classification should be based on GAAP (Generally Accepted Accounting Principle) rules.
- The title of the Balance Sheet should appear in the format “Balance Sheet December 31, 2013”. This again would depend upon the textbook.
- Show all necessary calculations before presenting the Balance Sheet.
- MathType / Microsoft Equation 3.0 / Excel could be used for such calculations.
- A single line (a totaling rule) should always be placed under the column of figures to be added or subtracted.

- Always use double underline to highlight the final sums.
  - In Microsoft Word, double underline can be inserted as shown below after selecting required number or text.



- In Microsoft Excel, double underline can be inserted as shown below after selecting required number or text.



**Example:**

Calculate the closing balance in the Building Account:

<b>Particulars</b>	<b>Amount \$</b>
Building Balance Jan 1, 2012	20,000.00
Additions made during year	3,000.00
Buildings retired	(1,000.00)
<b>Balance Dec 31, 2012</b>	<b><u>22,000.00</u></b>

Additional information should be provided within parentheses.

**Example:**

<u>Stock Holder's Equity (in Millions)</u>	
Common Stock, Par Value \$5 per share (10,000 Shares issued)	\$50,000

The disclosure notes in the financial statements related to the Balance Sheet should always appear on the face of the Balance Sheet.

<b>J N Corporation</b>			
<b>Balance Sheet</b>			
31-Dec-07			
	Amount \$	Amount \$	Amount \$
<b>ASSETS :</b>			
<b>Current Assets:</b>			
Cash		197,000	
Trading securities ( Cost \$145,000)		153,000	
Accounts Receivable	435,000		
Less: Allowance for Doubtful debts	25,000	410,000	
Inventories		597,000	
<b>Total Current Assets</b>			<b>1,357,000</b>
<b>Investments:</b>			
Long - term investment in bonds		299,000	
Long - term investment in stocks		277,000	
<b>Total Long - term Investment</b>			<b>576,000</b>
<b>Property, plant and equipment:</b>			
Land		\$260,000	
Building	1,040,000		
Less: Accumulated Depreciation	152,000	888,000	
Equipment	600,000		
Less: Accumulated Depreciation	60,000	540,000	
<b>Total Property, plant and equipment</b>			<b>1,688,000</b>
<b>Intangible Assets:</b>			
Franchise		160,000	
Patents		195,000	
<b>Total Intangible Assets</b>			<b>355,000</b>
<b>Total Assets</b>			<b>3,976,000</b>
<b>LIABILITIES AND STOCK HOLDER'S EQUITY</b>			
<b>Current Liabilities:</b>			
Short term notes payable	90,000		
Accounts Payable	455,000		
Accrued liabilities	96,000		
Dividends Payable	136,000		
<b>Total Current Liabilities</b>		<b>777,000</b>	
<b>Long Term Liabilities:</b>			
Long - Term note payable	\$900,000		
Bonds Payable	1,000,000		
<b>Total Long - term Liabilities</b>		<b>1,900,000</b>	
<b>Total Liabilities</b>			<b>\$2,677,000</b>
<b>Stockholders' Equity:</b>			
Common Stock	1,000,000		
Additional paid in capital	80,000	1,080,000	
Add: Retained Earnings		410,000	
Less: Treasury Stock		-191,000	
<b>Total Stockholders' Equity</b>			<b>1,299,000</b>
<b>Total Liabilities and Stockholders' Equity</b>			<b>3,976,000</b>
Note 1: The Company has Capital expenditure purchase commitment approximating \$7 Millions			

### Statement of Cash Flows:

- Statement of Cash Flows should be prepared using only tables
- The Operating, Investing, and Financing activities should appear distinctly and should be properly classified.
- The title should appear as:  
“Statement of Cash Flows for the year ending December 31, 2013”
- The calculation of Increase/Decrease in Assets/Liabilities (when the indirect method is used) should always precede the Statement of Cash Flows.
- This calculation should be shown clearly in a table.

### Example:

Calculate the increase/decrease in the Assets/Liabilities.

Current Assets / Current Liabilities	2014	2013	Increase/(Decrease)
	Amount \$	Amount \$	Amount \$
Accounts Receivable	33,000.00	14,000.00	19,000.00
Accounts Payable	29,000.00	15,000.00	14,000.00
Income Taxes Payable	7,000.00	8,000.00	(1,000.00)
Inventory	30,000.00	20,000.00	10,000.00
Bonds Payable	27,000.00	33,000.00	(6,000.00)
Common Stock	18,000.00	14,000.00	4,000.00

- When the Direct Method is used, the calculations for Cash receipts /Cash payments should always precede the Statement of Cash Flows
- Use MathType / Microsoft Equation 3.0 for these calculations

### Example:

Calculate the cash receipts from customers.

$$\begin{aligned}
 \text{Cash receipts from customers} &= \text{Sales revenue} - \text{Increase in Accounts receivable} \\
 &= \$242,000 - \$19,000 \\
 &= \$223,000
 \end{aligned}$$

- The significant Non Cash Transactions should always appear on the face of the Statement.

<b>R Company</b> <b>Statement of cash flows</b> For the year ended December 31, 2014		
Particulars	Amount \$	Amount \$
Net Income		32,000
<b>Add:</b>		
Depreciation expense	13,300	
Increase in accounts payable	14,000	
Decrease in income tax payable	(1,000)	
Increase in accounts receivable	(19,000)	
Increase in inventory	(10,000)	(2,700)
<b>Cash flow from operating activities</b>		<b>29,300</b>
<b>Investing activities</b>		
Cash from sale of equipment		9,700
<b>Financing activities</b>		
Redemption of bonds payable	(6,000)	
Common stock issued	4,000	
Payment of dividends	(20,000)	(22,000)
Increase in cash balance		17,000
Cash balance as on 31-12-2013		20,000
<b>Cash balance as on 31-12-2014</b>		<b>37,000</b>

- Always use double underline to highlight the final sums

### AC2. Technology:

Use Microsoft Excel for journals, T-accounts, and financial statements.

### AC3. Assumptions:

State your assumptions clearly and in precise terms.

Such assumptions should appear by way of “Notes” in the section below the Financial Statements, Journals or any calculations. These assumptions should be included in order to make your solution clearer to the student.

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## **Example solutions – Accounting**

### **List of changes made over Version 9.1**

1. Example 2 has been modified.....page no.18
2. Example 4 has been modified as per MCQ guidelines .....page no.20

### **List of changes made over Version 9.2**

1. Accounting example 4 has been modified as per MCQ guidelines .....Page no.20
2. Accounting example 6 – FB has been added.....Page no.25
3. Accounting example 7 – T/F has been added.....Page no.25
4. Accounting example 8 - VSAQ has been Added.....Page no. 25

## Accounting Example 1: Calculation Based

### Question:

L Company is considering the purchase of a new machine. Its invoice price is \$122,000, freight charges are estimated to be \$3,000, and installation costs are expected to be \$5,000. Salvage value of the new machine is expected to be zero after a useful life of 4 years. Existing equipment could be retained and used for an additional 4 years, if the new machine is not purchased. At that time, the salvage value of the equipment would be zero.

If the new machine is purchased now, the existing machine would be scrapped. L's accountant, LH, has accumulated the following data regarding annual sales and expenses with and without the new machine.

1. Without the new machine, L can sell 10,000 units of a product annually at a per unit selling price of \$100. If the new unit is purchased, the number of units produced and sold would increase by 25%, and the selling price would remain the same.
2. The new machine is faster than the old machine, and it is more efficient in its usage of materials.  
With the old machine, the gross profit rate will be 28.5% of sales, whereas the rate will be 30% of sales with the new machine.
3. Annual selling expenses are \$160,000 with the current equipment. Because the new equipment would produce a greater number of units to be sold, annual selling expenses are expected to increase by 10%, if it is purchased.
4. Annual administrative expenses are expected to be \$100,000 with the old machine, and \$112,000 with the new machine.
5. The current book value of the existing machine is \$40,000. L uses straight-line depreciation.
6. L's management has a required rate of return of 15% on its investment and a cash payback period of no more than 3 years.

Instructions:

With the class divided into groups, answer the following. (Ignore income tax effects.)

- (a) Calculate the annual rate of return for the new machine. (Round off to two decimals.)
- (b) Compute the cash payback period for the new machine. (Round off to two decimals.)
- (c) Compute the net present value of the new machine. (Round off to the nearest dollar.)
- (d) On the basis of the foregoing data, would you recommend that L buy the machine? Why?

### Solution:

(a)

#### **Determine the annual rate of return for the new machine.**

**Annual rate of return** is the rate of return on the investment, which is expressed as a percentage of the total amount invested.

The following table shows the calculation of net income:

Net Income		
Particulars	Amount	Amount
Sales		\$5,000,000
Cost of goods sold	\$3,500,000	
Selling expenses	\$704,000	
Administrative expenses	\$440,000	
Depreciation	\$120,000	
Loss on disposal of machine	\$30,000	(\$4,794,000)
<b>Net Income</b>		<b>\$206,000</b>

The following details have been obtained from the table:

Expected annual net income for four years is \$206,000.

Initial investment is \$130,000.

$$\begin{aligned} \text{Average investment} &= \frac{\$130,000 + \$0}{2} \\ &= \$65,000 \end{aligned}$$

$$\begin{aligned} \text{Expected annual net income for one year} &= \frac{\$206,000}{4} \\ &= \$51,500 \end{aligned}$$

The formula to calculate the annual rate of return is,

$$\text{Annual rate of return (\%)} = \frac{\text{Expected annual net income}}{\text{Average investment}} \times 100$$

Substitute \$51,000 for Expected annual net income and \$65,000 for Average investment.

$$\begin{aligned} \text{Annual rate of return (\%)} &= \frac{\$51,500}{\$65,000} \times 100 \\ &= 0.7923 \text{ (79.23\%)} \end{aligned}$$

Therefore, the annual rate of return is 79.23%.

### Compute the cash payback period of the new machine.

Cash payback period is the cost of capital investment divided by the net annual cash flow.

Cost of investment is \$120,000

Net annual cash flows is \$95,000 [\$30,000 + \$65,000].

The formula to calculate the payback period is,

$$\text{Cash payback period} = \frac{\text{Cost of investment}}{\text{Net annual cash flows}}$$

Substitute \$120,000 for Cost of Investment and \$95,000 for Net annual cash flows.

$$\begin{aligned} \text{Cash payback period} &= \frac{\$120,000}{\$95,000} \\ &= 1.26 \text{ Years} \end{aligned}$$

Therefore, the cash payback period is 1.26 years.

---

**(b)**

**Compute the Net Present Value of new machine.**

Net Present Value (NPV) is the difference between the present value of cash inflows and initial investment.

Initial investment is \$120,000.

Net annual cash flows for four years is \$95,000.

Annuity Present value factor for cash inflows for four years (at 15% ) is 2.8550.

Calculate the Present Value of Cash Inflows:

$$\begin{aligned} \text{Present value of cash inflows} &= \text{Cash inflows} \times \text{Present value factor for four years} \\ &= \$95,000 \times 2.8550 \\ &= \$271,225 \end{aligned}$$

Calculate the Net Present Value (NPV):

$$\begin{aligned} \text{NPV} &= \$271,225 - \$120,000 \\ &= \$151,225 \end{aligned}$$

Therefore, Net Present Value is \$151,225.

**Decision rule:** If the NPV is positive or zero, then the project is accepted; if the NPV is negative, the project is rejected.

Here, the Net Present Value is positive; therefore, the project is accepted.

**(c)**

Yes, I would strongly recommend L to buy the machine, because it has a **higher annual rate of return with a positive NPV**.

## Accounting Example 2: Conceptual

### Question:

S Company reported the following information for the current year: cost of goods sold, \$347,000; increase in inventory, \$14,700; and increase in accounts payable, \$8,200. What is the amount of cash paid to suppliers that S would report on its statement of cash flows under the direct method?

- a. \$324,100
- b. \$340,500
- c. \$353,500
- d. \$369,900

---

### Solution:

**Cash payment to creditors:** Company is required to pay to its suppliers the amount for which the inventory is purchased. These purchases can be either cash purchases or credit purchases. In case of goods purchased on credit, the cash paid to suppliers during the year will be determined by taking into consideration the following two accounts:

- Purchase account
- Accounts payables account

The formula for cash paid to suppliers is as follows:

Cash payment to creditors

$$\begin{aligned} &= \text{Cost of goods sold} + \text{Increase in inventory} \\ &\quad - \text{Decrease in inventory} + \text{Decrease in Accounts Payable account} \\ &\quad - \text{Increase in Accounts Payable account} \end{aligned}$$

---

Thus, amount of cash paid to suppliers by S Company using direct method is as follows:

$$\begin{aligned} \text{Cash Payment to Suppliers} &= \$347,000 + \$14,700 - \$8,200 \\ &= \boxed{\$353,500} \end{aligned}$$

Hence, the correct answer is **option (c)**.

---

Clearly from the above calculation, the remaining options are incorrect.

**Accounting Example 3: Diagrammatic**

**Question:**

How will your company be structured? Include a statement of the philosophy of management and company culture.

---

**Solution:**

Organizational structure involves activities such as coordination, supervision, and task allocation. These tasks are focused on achieving organizational goals.

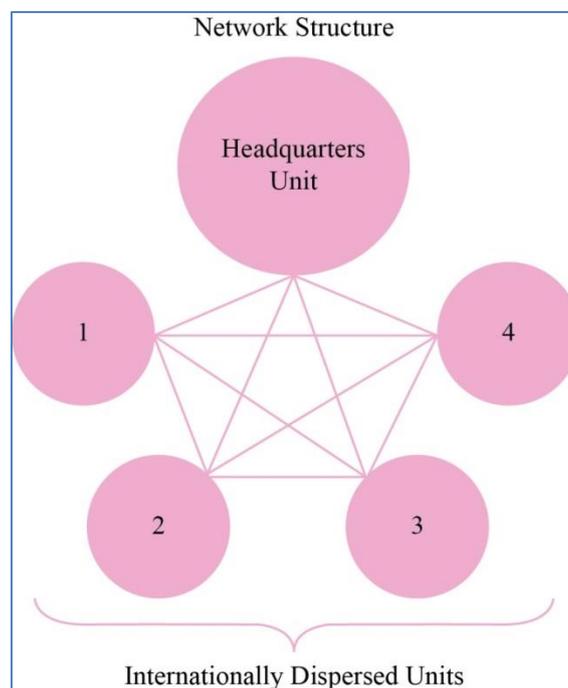
My company will use organizational charts for defining the organizational activities with the help of latest software and technology. These charts will be helpful in succession planning and work flow approval.

---

My organization will also have a network structure. Its primary function will be administration. Most of its other functions will be outsourced to other firms. It will also help those firms operating across the world to coordinate with each other.

The philosophy of my organization will be “one head, one plan, and one goal.”

The following figure shows a pictorial representation of my Organisation:



## Accounting Example 4: Multiple Choices type

### Question:

Sensitivity to business etiquette

- a. Reduces the chance of interpersonal blunders that might affect communication.
  - b. Is considered by most companies to be a waste of time in today's fast-paced markets.
  - c. Is now legally required in all 50 states.
  - d. Always increases the cost of business communication.
- 

### Solution:

Business etiquette fosters better communication in the globalized world. Hence, the given statement is a false proposition to consider business etiquette as a waste of time in today's fast-paced market.

Therefore, option (b) is incorrect.

---

There is no legal requirement for maintaining sensitivity to business etiquette in all 50 states. Therefore, option (c) is incorrect.

---

Business etiquette promotes better communication and interpersonal relations, so the benefits of business communication outweigh the cost of business communication.

Therefore, option (d) is incorrect.

---

Business etiquette eliminates misunderstandings, miscommunication, and builds business reputation. Hence, etiquette is important in business communication. Etiquette is required nearly in every aspect of customer service. Practicing honesty and employing proper etiquette enhance candid communication. It also saves cost to any commercial entity.

Therefore, **option (a) is correct.**

**Accounting Example 5: Graphical****Question:**

The Executive officers of Company V assess the profitability of a potential new product. They expect the variable cost of making the product to be \$54 per unit and fixed manufacturing cost to be \$720,000. The executive officers plan to sell the product for \$72 per unit.

Determine the Break-even point in units and dollars using each of the following:

- Contribution margin per unit
- Equation method
- Contribution margin ratio
- Prepare a break even graph to illustrate the cost-volume-profit relationship.

**Solution:**

Break-even point is the point at which the cost and revenue are equal, and there is no net loss or gain. Break-even point can be determined using contribution approach, equation approach, or graphical approach.

a)

**Calculate the Break-even point in units and dollars using Contribution margin per unit approach.**

Write the formula to calculate the Contribution margin per unit.

$$\text{Contribution margin per unit} = \text{Sales price per unit} - \text{Variable cost per unit}$$

Substitute \$72 for Sales price per unit and \$54 for Variable cost per unit.

$$\begin{aligned} \text{Contribution margin per unit} &= \$72 - \$54 \\ &= \$18 \end{aligned}$$

The Contribution margin per unit is \$18.

Write the formula to calculate the Break-even point in units.

$$\text{Break-even point in units} = \frac{\text{Fixed cost}}{\text{Contribution margin per unit}}$$

Substitute \$720,000 for Fixed cost and \$18 for Contribution margin per unit.

$$\begin{aligned} \text{Break-even point in units} &= \frac{\$720,000}{\$18} \\ &= 40,000 \end{aligned}$$

Hence, the Break-even point in terms of units is 40,000 units.

Write the formula to calculate the Break-even point in dollars.

$$\text{Break-even point in dollars} = \text{break-even point in units} \times \text{sales price per unit}$$

Substitute \$40,000 for Break-even point in units and \$72 for Sales price per unit.

$$\begin{aligned} \text{Break-even point in dollars} &= 40,000 \times \$72 \\ &= \$2,880,000 \end{aligned}$$

Hence, the Break-even point in terms of dollars is \$2,880,000.

---

b)

**Calculate the Break-even point in units and dollars through equation approach.**

Write the formula to calculate Net Income.

$$\text{Profit (Net Income)} = \text{Sales} - (\text{Variable Costs} + \text{Fixed Costs}) \quad \dots(1)$$

Calculate Sales value.

$$\text{Sales} = \text{selling price per unit} \times \text{number of units sold.}$$

Substitute \$75 for selling price per unit and  $N$  for no of units sold.

$$\text{Sales} = \$75N$$

Calculate Variables costs value.

$$\text{Variable cost} = \text{Variable cost per unit} \times \text{no.of units sold}$$

Substitute \$54 for variable cost per unit and  $N$  for no of units sold.

$$\text{Variable cost} = \$54N$$


---

Substitute  $\$75N$  for Sales,  $\$54N$  for Variable costs, \$720,000 for Fixed costs, and \$0 for Net Income (Profit) at the Break-even point in equation(1).

$$\$0 = \$72N - (\$54N - \$720,000)$$

$$\$0 = \$18N - \$720,000$$

$$\$18N = \$720,000$$

$$N = \frac{\$720,000}{\$18}$$

$$N = 40,000 \text{ units}$$

Hence, the Break-even point is at 40,000 units .

Write the formula to calculate the Break-even point in dollars.

$$\text{Break-even point in dollars} = \text{Break-even point in units} \times \text{Sales price per unit}$$

Substitute 40,000 units for Break-even point and \$72 for Sales price per unit.

$$\begin{aligned}\text{Break-even point in dollars} &= 40,000 \times \$72 \\ &= \$2,880,000\end{aligned}$$

Therefore, the Break-even point in dollars is at  $\boxed{\$2,880,000}$ .

---

c)

**Calculate Break-even point in units and dollars using Contribution margin ratio.**

First, find the Contribution margin ratio.

$$\text{Contribution margin ratio} = \frac{\text{Contribution margin per unit}}{\text{Sale price per unit}}$$

Substitute \$18 for Contribution margin per unit and \$72 for Sales price per unit.

$$\begin{aligned}&= \frac{\$18}{\$72} \\ &= 0.25 \text{ or } 25\%\end{aligned}$$

Hence, the Contribution margin ratio is 0.25.

---

Write the formula to calculate the Break-even point in dollars.

$$\text{Break-even point in dollars} = \frac{\text{Fixed cost}}{\text{Contribution margin ratio}}$$

Substitute 0.25 for Contribution margin ratio and \$720,000 for Fixed cost.

$$\begin{aligned}\text{Break-even point in dollars} &= \frac{\$720,000}{0.25} \\ &= \$2,880,000\end{aligned}$$

Therefore, the break-even point in dollars is  $\boxed{\$2,880,000}$ .

Write the formula to calculate the Break-even point in units.

$$\text{Break-even point in units} = \frac{\text{Break-even point in dollars}}{\text{Sales price per unit}}$$

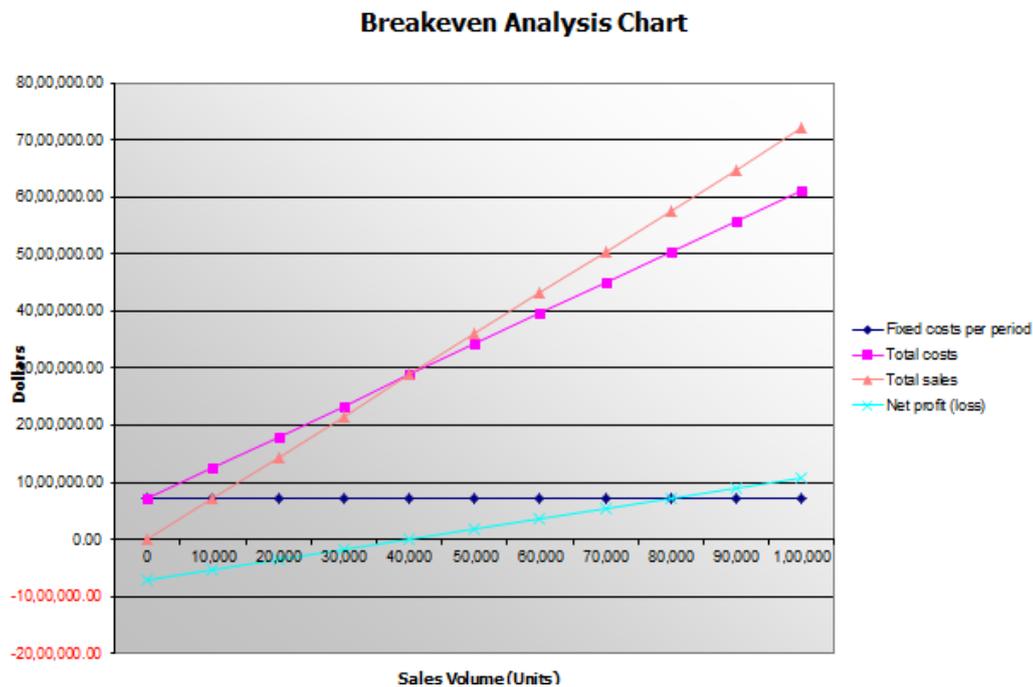
Substitute \$2,880,000 for Break-even point in dollars and \$72 for Sales price per unit.

$$\begin{aligned} \text{Break-even point in units} &= \frac{\$2,880,000}{\$72} \\ &= \$40,000 \end{aligned}$$

Therefore, the Break-even point in dollars is 40,000units .

d)

Draw a Break-even graph to show the Cost-Volume-Profit relationship.



In the graph, the  $x$ -axis represents quantity in units, and  $y$ -axis represents the Costs and Sales in dollars.

The Fixed costs are same at all levels of output and sales. Therefore, the Fixed costs line is horizontal to the  $x$ -axis. The point at which the total cost is equal to total sales is called the Break-even point.

**Accounting Example 6: Fill in the blank type****Question:**

Accounts payable is a \_\_\_\_\_ reported on the balance sheet.

---

**Solution:**

Accounts payable is the short-term obligation of an entity to pay for the suppliers for the products supplied or services rendered on credit. Normally, the purchase transactions occur frequently and obligation for payments will arise within a period less than twelve months. As per U.S GAAP, an obligation that should be paid with in a period of one year or one operating cycle should be reported as current liability on the balance sheet.

---

Hence, the missing word is **current liability**.

**Accounting Example 7: True or False type****Question:**

A credit sale made on a credit card issued by a credit card company is accounted for in the same manner as a credit sale made on a bank credit card. True or False?

---

**Solution:**

In case of sale made on bank credit card, the sale is accounted for the same as cash. But, credit sales on credit card issued by a credit card company, is considered a sale on account.

---

Hence, the given statement is **False**.

**Accounting Example 8: Very Short Answer type****Question:**

What is a journal entry?

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**Solution:**

In the system of book keeping, the financial transactions will be recorded in chronological order in a general journal.

---

Journal entry is the accounting method to express the effect of financial transactions on accounts.

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