

Chapter 32 – Gross Profit Method

July Kristell I. Villanueva (Problem 32-1 – Problem 32-4)

Lyka A. Villas (Problem 32-5 – Problem 32-8)

Mary Jane G. Macaraig (Problem 32-9– Problem 32-10)

Problem 32-1 (AICPA Adapted)

Gecelle Company reported during the current year:

Beginning Inventory	500,000
Net purchases	2,500,000
Net sales	3,200,000

A physical count at year-end resulted in an inventory of P575,000. The gross profit had remained constant at 25%. The entity suspected that some inventory may have been taken by a new employee.

What is the estimated cost of missing inventory at year-end?

- a. 100,000
- b. 175,000
- c. 225,000
- d. 25,000**

Solution:

Beginning inventory	500,000
Net purchases	<u>2,500,000</u>
Goods available for sale	3,000,000
Cost of goods sold (75% x 3,200,000)	<u>(2,400,000)</u>
Ending inventory	600,000
Physical inventory	<u>575,000</u>
Missing Inventory	<u><u>25,000</u></u>

In the absence of any contrary statement, the gross profit rate is **based on sales**.

Thus, if the gross profit rate is 25% on sales, the cost ratio is 75%.

Problem 32-2 (AICPA Adapted)

Karen Company reported the following information for the current year:

Beginning inventory	5,000,000
Purchases	26,000,000
Freight in	2,000,000
Purchase returns and allowances	
3,500,000	
Purchase discounts	1,500,000
Sales	40,000,000
Sales returns	3,000,000
Sales allowances	500,000
Sales discounts	
1,000,000	

A physical inventory taken at year-end resulted in an ending inventory of P4,000,000.

At year-end, unsold goods out on consignment with selling price of P1,000,000 are in the hands of a consignee.

The gross profit was 40% on sales.

1. What is the cost goods available for sale?
 - a. **28,000,000**
 - b. 31,000,000
 - c. 33,000,000
 - d. 29,500,000
2. What is the cost of goods sold?
 - a. 21,900,000
 - b. **22,200,000**
 - c. 21,300,000
 - d. 24,000,000
3. What is the estimated cost of inventory shortage?
 - a. 1,800,000
 - b. 2,700,000
 - c. **1,200,000**
 - d. 2,100,000

Solutions:

Question 1

Beginning inventory	5,000,000
Purchases	26,000,000
Freight in	2,000,000
Purchase returns and allowances (3,500,000)	
Purchase discounts	<u>(1,500,000)</u>
Cost of goods available for sale	<u>28,000,000</u>

Question 2

Sales	40,000,000
Sales return	<u>(3,000,000)</u>
Net sales	37,000,000
Multiply by cost ratio	<u>60%</u>
Cost of goods sold	<u>22,200,000</u>

Net sales	100%
Gross profit rate on sales	<u>(40%)</u>

Cost ratio	<u>60%</u>
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Sales allowances and sales discounts are **ignored** in determining net sales under the gross profit method.*

Question 3

Cost of goods available for sale	28,000,000
Cost of goods sold	<u>(22,200,000)</u>
Ending inventory	5,800,000
Physical count	(4,000,000)
Cost of goods out on consignment (1,000,000 x 60%)	<u>(600,000)</u>
Cost of inventory shortage	<u>1,200,000</u>

Problem 32-3 (AICPA Adapted)

At year-end, Pamela Company reported that a flood caused severe damage to the entire inventory. Based on recent history, the entity had a gross profit of 25% of sales.

The entity provided the following information for the current year:

Inventory, January 1	500,000
Purchases	4,000,000
Purchase returns	200,000
Sales	5,600,000
Sales returns	400,000
Sales allowances	100,000

1. What is the cost of goods sold for the year?
 - a. 4,160,000
 - b. 4,080,000
 - c. **3,900,000**
 - d. 3,825,000

2. What is the cost of ending inventory damaged by flood?
 - a. 475,000
 - b. **400,000**
 - c. 260,000
 - d. 220,000

Solutions:

Sales	5,600,000
Sales returns	<u>(400,000)</u>
Net sales	<u>5,200,000</u>
Cost ratio (100% - 25%)	
<u>75%</u>	
<i>Sales allowances are ignored in determining net sales under the gross profit method.</i>	
Goods available for sale	4,300,000
Cost of goods sold (75% x 5,200,000)	<u>(3,900,000)</u>
Ending inventory destroyed	<u>400,000</u>

Problem 32-4 (AICPA Adapted)

On September 30, Brock Company reported that a fire caused severe damage to the entire inventory. The entity had a gross profit of 30% **on cost**.

The entity provided the following data for nine months ended September 30.

Inventory at January 1
Net purchases
Net sales

A physical inventory disclosed usable damaged goods which can be sold for P100,000.

1. What is the estimated cost of goods sold for the nine months ended September 30?
 - a. 5,500,000
 - b. 4,970,000
 - c. 5,096,000
 - d. 5,600,000**

2. What is the estimated amount of fire loss?
 - a. 1,500,000
 - b. 1,400,000**
 - c. 2,004,000
 - d. 1,964,000

Solutions:

Cost of goods sold (7,280,000 / 130%)
5,600,000

Sales ratio (100% + 30%)	<u>130%</u>
Inventory – January 1	1,100,000
Net purchases	<u>6,000,000</u>
Goods available for sale	
7,100,000	
Cost of goods sold	<u>(5,600,000)</u>
Inventory – September 30	1,500,000
Realizable value of damaged goods	<u>(100,000)</u>
Fire loss on inventory	
<u>1,400,000</u>	

Problem 32-5 (IAA)

At year-end, a storm surge damaged the warehouse of Braveheart Company. The entire inventory and many accounting records were completely destroyed.

	January 1	December 1
Inventory	1,500,000	
Purchases		5,500,000
Cash Sales		900,000
Collection of accounts receivable		8,400,000
Accounts Receivable	700,000	1,100,000
Gross profit on sales		40%

What is the inventory loss from the storm surge?

- a. **1,180,000**
- b. 1,720,000
- c. 2,700,000
- d. 2,260,000

Solution:

Collection of accounts receivable	8,400,000
Accounts Receivable – January 1	(700,000)
Accounts Receivable – December 31	<u>1,100,000</u>
Sales on Account	8,800,000
Cash sales	<u>900,000</u>
Total Sales	<u>9,700,000</u>
Inventory – January 1	1,500,000
Purchases	<u>5,500,000</u>
Goods available for sale	7,000,000
Cost of goods sold (9,700,000 x 60%)	<u>(5,820,000)</u>
Inventory – December 31	<u>1,180,000</u>
Cost ratio (100%-40%)	<u>60%</u>

Problem 32-6 (IAA)

On the night of September 30,2019, a fire destroyed most of the merchandise inventory of Sonia Company.

All good were completely destroyed except for partial damaged goods that normally sell for P100,000 and that had an estimated net realizable value of 25,000 and undamaged goods that normally sell for P60,000.

Inventory, January 1	660,000
Net Purchases, January 1 through September 30	4,240,000
Net Sales, January 1 through September 30	5,600,000

	Total	2018	2017	2016
Net Sales	9,000,000	5,000,000	3,000,000	1,000,000
Cost of goods sold	<u>6,750,000</u>	<u>3,840,000</u>	<u>2,200,000</u>	<u>710,000</u>
Gross Income	<u>2,250,000</u>	<u>1,160,000</u>	<u>800,000</u>	<u>290,000</u>

What is the estimated amount of fire loss on September 30,2019?

- a. 700,000
- b. 615,000
- c. 630,000**
- d. 580,000

Solution:

Average gross profit rate (2,250,000/9,000,000) 25%

Cost Ratio (100% - 25%) 75%

Inventory – January 1		660,000
Net purchases		<u>4,240,000</u>
Goods available for sale		4,900,000
Cost of goods sold (5,600,000x75%)		<u>(4,200,000)</u>
Inventory – September 30		700,000
Less: Undamaged goods (60,000x75%)	45,000	
Realizable value of damaged goods	<u>25,000</u>	<u>70,000</u>
Fire loss		<u>630,000</u>

Problem 32-7 (AICPA Adapted)

At year-end, Empress Company had a fire which completely destroyed the goods in process inventory. A physical inventory was taken after the fire.

The raw materials were valued at P600,000, the finished goods at P1,000,000 and factory supplies at P100,000 at year-end.

The beginning inventories consisted of the following:

Finished goods	1,400,000
Goods in process	1,000,000
Raw Materials	300,000
Factory Supplies	400,000

Data for the current year

Sales	3,000,000
Purchases	1,000,000
Freight in	100,000
Direct labor	800,000
Manufacturing overhead – 50% of direct labor	?
Average gross profit on sales	30%

1. What is the cost of goods sold?

- a. **2,100,000**
- b. 1,700,000
- c. 1,900,000
- d. 2,300,000

2. What is the cost of goods manufactured?

- a. 2,500,000
- b. **1,700,000**
- c. 3,100,000
- d. 2,300,000

3. What is the estimated cost of the ending goods in process that were completely destroyed by the fire?

- a. **1,300,000**
- b. 2,100,000
- c. 2,000,000
- d. 1,700,000

Question 1:

Cost of goods sold (70% x 3,000,000)	<u>2,100,000</u>
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Question 2:

Finished goods - beginning	1,400,000
Cost of goods manufactured (SQUEEZE)	<u>1,700,000</u>
Goods available for sale	3,100,000
Finished goods – ending	<u>(1,000,000)</u>
Cost of goods sold	<u>2,100,000</u>

The cost of goods manufactured is “squeezed” by simply working back from the cost of goods sold.

Question 3:

Raw materials - beginning		300,000
Purchases	1,000,000	
Freight in	<u>100,000</u>	<u>1,100,000</u>
Raw materials available for use		1,400,000
Raw materials – ending		<u>(600,000)</u>
Raw materials used		800,000
Direct labor		800,000
Manufacturing overhead (50% x 800,000)		<u>400,000</u>
Total manufacturing cost		2,000,000
Goods in process – beginning		<u>1,000,000</u>
		3,000,000
Total goods in process		
Goods in process – ending (SQUEEZE)		<u>(1,300,000)</u>
Cost of goods manufactured		<u>1,700,000</u>

The amount of ending goods in process is “squeezed” by simply working back from the cost of goods manufactured.

The factory supplies are no longer considered because these are already included in **manufacturing overhead**.

Problem 32-8 (IAA)

Moderate Company provided the following information :

June

July

August

Sales on account	7,200,000	7,360,000	7,600,000
Cash sales	720,000	800,000	1,040,000

All merchandise is marked up to sell at invoice cost plus 20%. Inventory at the beginning of each month is 30% of that month's cost of goods sold.

1. What is the cost of goods sold?

- a. 5,760,000
- b. 6,000,000
- c. 6,080,000
- d. 6,600,000**

2. What is the amount of purchases for July?

- a. 6,528,000
- b. 8,304,000
- c. 6,800,000
- d. 6,920,000**

Solutions:

Question 1:

Cost of goods sold for **June**
 $(7,200,000 + 800,000 = 7,920,000 / 120\%)$ 6,600,000

Question 2:

Cost of goods sold for **July**
 $(7,360,000 + 800,000 = 8,160,000 / 120\%)$ 6,800,000

Cost of goods sold for **August**
 $(7,600,000 + 1,040,000 = 8,640,000 / 120\%)$ 7,200,000

Inventory – July 1 (30% x 6,800,000) 2,040,000
Purchases for July (SQUEEZED) 6,920,000
Goods Available for sale 8,960,000

Inventory – July 31 (30% x 7,200,000) (2,160,000)
Cost of goods sold for July 6,800,000

Sales ratio (100%+20%) 120%

Problem 32-9 (AICPA Adapted)

On April 30, a fire damaged the office of Amaze Company. The following balances were gathered from the general ledger on March 31:

Accounts receivable	920,000
Inventory – January 1	1,880,000
Accounts payable	950,000
Sales	3,600,000
Purchases	1,680,000

- An examination of April bank statement and cancelled checks revealed checks written during the period April 1 – 30 as follows:

Accounts payable as of March 31	240,000
April merchandise shipments	80,000
Expenses	160,000

Deposits during the same period amounted to ₱ 440,000 which consisted of collections from customers with the exception of ₱ 20,000 refund from a vendor for merchandise is returned in April.

- Customers acknowledged indebtedness of ₱ 1,040,000 at April 30. Customers owed another ₱ 60,000 that will never be recovered. Of the acknowledged indebtedness, ₱40,000 may prove uncollectible.
- Correspondence with suppliers revealed unrecorded obligations at April 30, of ₱ 340,000 for April merchandise shipment including ₱ 100,000 for shipment in transit on that date.
- The average gross profit rate is 40%.
- Inventory with a cost of ₱ 260,000 was salvaged and sold for ₱ 140,000. The balance of the inventory was a total loss.

1. What is total amount of sales up to April 30?

- 4,200,000**
- 4,220,000
- 4,140,000
- 4,160,000

2. What is the total amount of purchases up to April 30?

- 1,760,000
- 2,100,000**
- 2,020,000
- 1,680,000

3. What is the inventory on April 30?

- a. 1,476,000
- b. 1,464,000
- c. 1,440,000**
- d. 1,428,000

4. What is the fire loss to be recognized on April 30?

- a. 1,440,000
- b. 1,300,000
- c. 1,340,000
- d. 1,200,000**

Solution

Question 1

Accounts receivable - April 30	1,040,000
Writeoff	60,000
Collections from customers (440,000 - 20,000)	<u>420,000</u>
Total	1,520,000
Less: Accounts receivable - March 31	<u>920,000</u>
Sales for April	600,000
Sales up to March 31	<u>3,600,000</u>
Total Sales	<u>4,200,000</u>

Question 2

Accounts payable - April 30 for April shipments	340,000
Payment for April merchandise shipment	<u>80,000</u>
Purchases of April	420,000
Purchases up to March 31	<u>1,680,000</u>
Total purchases up to April 30	<u>2,100,000</u>

Cost Ratio (100% - 40%)	<u><u>60%</u></u>
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Question 3

Inventory - January 1	1,880,000
Purchases	2,100,000
Purchase return	<u>(20,000)</u>

Goods available for sale	3,960,000
Cost of good sold (4,200,000 - 60%)	<u>(2,520,000)</u>
Inventory - April 30	<u>1,440,000</u>

Cost Ratio (100% - 40%)	<u><u>60%</u></u>
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Question 4

Inventory - April 30	1,440,000
Goods in transit	(100,000)
Salvage value of inventory	<u>(140,000)</u>
Fire loss	<u>1,200,000</u>

Problem 32 – 10 (AICPA Adapted)

In conducting an audit of Remy Company for the year ended June 30, 2019, the entity's CPA observed that the physical inventory at an interim date, May 31, 2019.

Inventory, July 1, 2018	875,000
Physical Inventory, May 31, 2019	950,000
Sales for 11 months ended May 31, 2019	8,400,000
Sales for year ended June 30, 2019	9,600,000
Purchases for 11 months ended May 31, 2019	6,750,000
Purchases for year ended June 30, 2019	8,000,000

a. Shipments received in May and included in the physical inventory but recorded as June purchases 75,000

b. Shipments received in unsalable condition and excluded from physical inventory. Credit memos had not been received nor had chargebacks to vendors been recorded:

Total at May 31, 2019 10,000

Total at June 30, 2019 (including the May unrecorded chargebacks) 15,000

c. Deposit made with vendor and charge to purchases in April 2019. Product was shipped in July 2019. 20,000

d. Deposit made with vendor and charge to purchases in May 2019. Product was shipped FOB Destination, on May 29, 2019 and was included in May 31, 2019 physical inventory as goods in transit. 55,000

e. Through the carelessness of the receiving department a June shipment was damaged by rain. This shipment was later sold in June at the cost of 100,000

1. What is the cost of goods sold for the month of June 2019?

- a. **980,000**
- b. 960,000
- c. 880,000

d. 780,000

2. What is the inventory on June 30, 2019?

a. 1,240,000

b. 1,140,000

c. 1,160,000

d. 1,340,000

Solution

Question 1

	Physical Inventory May 31, 2019	Purchases up to May 31, 2019	Purchases up to June 30, 2019
Balances	950,000	6,750,000	8,000,000
a	-	75,000	-
b	-	(10,000)	(15,000)
c	-	(20,000)	(20,000)
d	(55,000)	(55,000)	-
Adjusted	<u>895,000</u>	<u>6,740,000</u>	<u>7,965,000</u>

Inventory - July 1, 2018	875,000
Purchases up to May 31, 2019	<u>6,740,000</u>
Goods available for sale	7,615,000
Inventory - May 31, 2019	<u>(895,000)</u>
Cost of goods sold	<u>6,720,000</u>
Sales up to May 31, 2019	8,400,000
Cost of goods sold	<u>6,720,000</u>
Gross profit	<u>1,680,000</u>
Gross profit rate on sales (1,680,000/8,400,000)	<u>20%</u>
Cost ratio (100% - 20%)	<u>80%</u>
Sales for June 2019 (9,600,000 - 8,400,000)	<u>980,000</u>

Question 2

Inventory, July 1, 2018		875,000
Purchases for the year ended June 30, 2019 (as adjusted)		<u>7,965,000</u>
Goods available for sale		8,840,000
Cost of goods sold		
Sales with profit (9,500,000 - 80%)	7,600,000	
Sales without gross profit	100,000	<u>(7,700,000)</u>
Inventory, June 30, 2019		<u><u>1,140,000</u></u>