Horngren’s Accounting

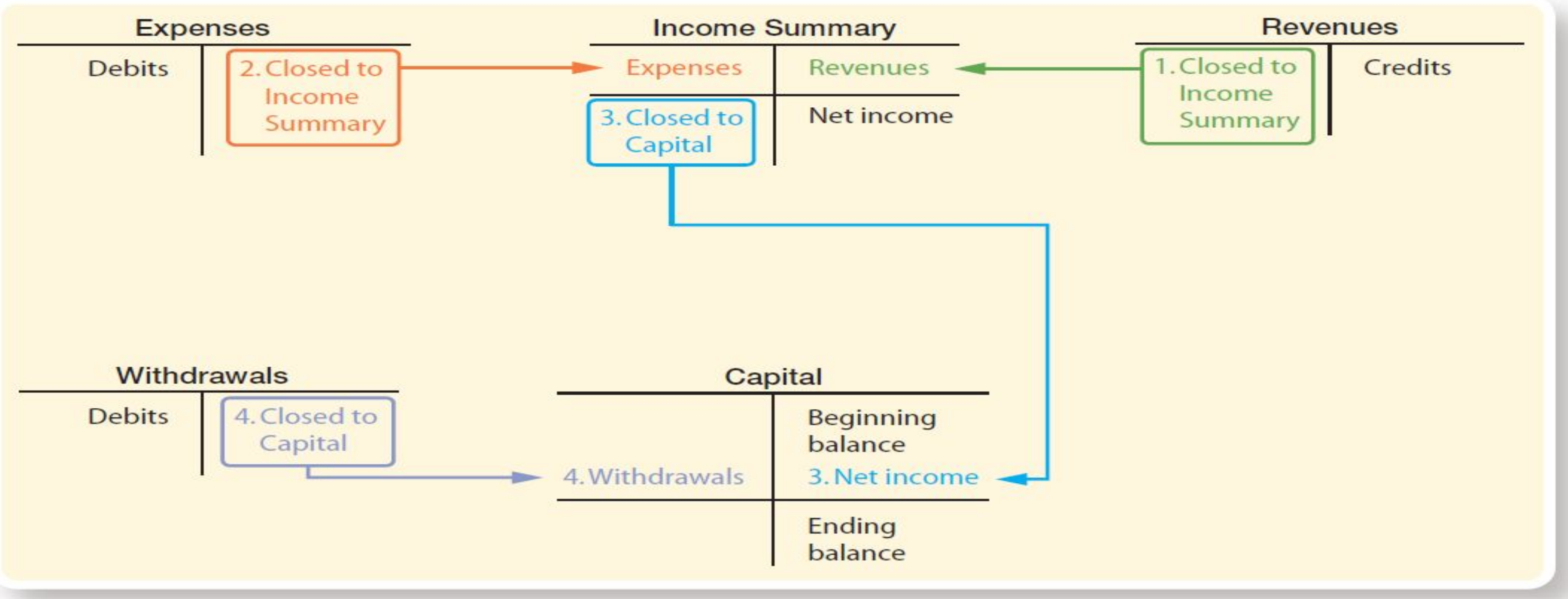
Merchandising Operations

Lecture Eleven
Lisa, Li

Summary of the Accounting Cycle

1. Start with beginning account balances
2. Analyze & journalize transactions
3. Post journal entries to ledger accounts
4. Prepare unadjusted trial balance
5. Prepare the worksheet (optional)
6. Journalize and post adjusting entries
7. Prepare adjusted trial balance
8. Prepare financial statements
9. Journalize and post closing entries
10. Prepare post-closing trial balance

Exhibit 4-5 | The Closing Process



Learning Objectives – Chapter 5

1. Describe merchandising operations and the two types of merchandise inventory systems
2. Account for the purchase of merchandise inventory using a perpetual inventory system
3. Account for the sale of merchandise inventory using a perpetual inventory system

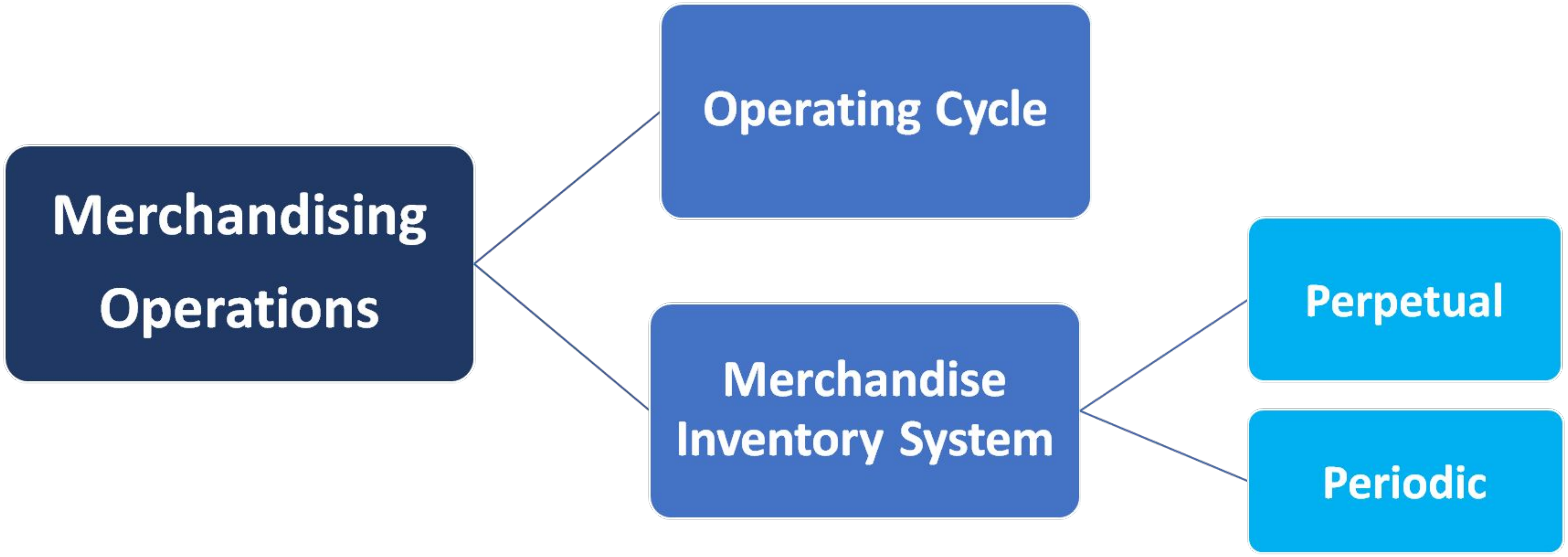
Learning Objectives – Chapter 5

4. Adjust and close the accounts of a merchandising business
5. Prepare a merchandiser's financial statements
6. Use the gross profit percentage to evaluate business performance

Learning Objectives 1

Describe merchandising operations and the two types of merchandise inventory systems

Merchandising Operations- Objective 1



What Are Merchandising Operations?

- Merchandiser: Seller of goods, not producer (not manufacturer)
- Can be wholesaler or retailer
- Inventory is an important current asset
- Managing A/R is critical to success

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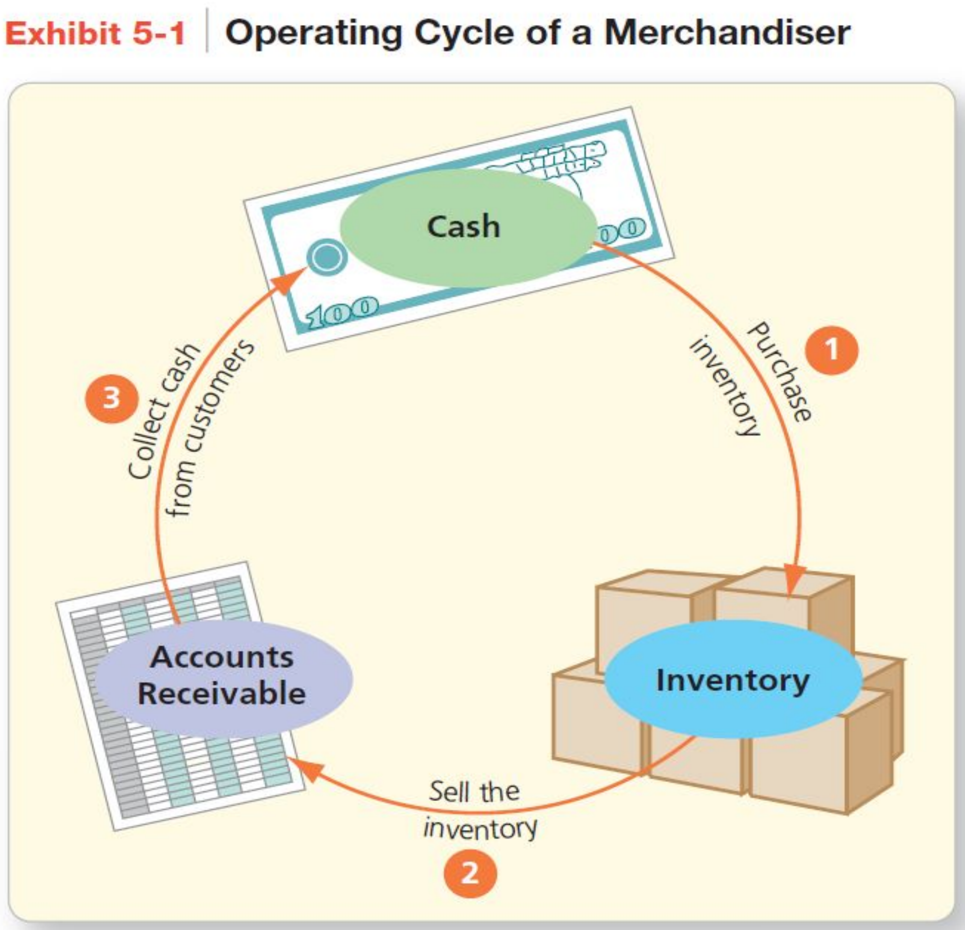
Operating Cycle of Merchandising Business



1. It begins when the company purchases inventory from an individual or business, called a vendor(manufacturer).
2. The company then sells the **merchandise inventory *** to a customer.
3. Finally, the company collects cash from customers.

***represents the value of inventory that the business has on hand to sell to customers.**

Unique Financial Statements of Merchandiser

- Because the operating cycle of a merchandiser is different than that of a service company, the financial statements differ.
- Can you find any differences between the two?

Exhibit 5-2 | **Financial Statements of a Service Company and a Merchandising Company**

SERVICE COMPANY
Income Statement
Year Ended December 31, 2015

Service Revenue		$ 230,000
Operating Expenses:		
Salaries Expense	$ 80,000	
Rent Expense	24,000	
Depreciation Expense—Furniture	9,000	
Utilities Expense	3,000	
Total Operating Expenses		(116,000)
Net Income		$ 114,000

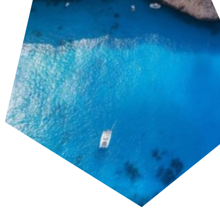
Service Revenue − Operating Expenses = Net Income

MERCHANDISING COMPANY
Income Statement
Year Ended December 31, 2015

Sales Revenue		$ 230,000
Cost of Goods Sold		(100,000)
Gross Profit		130,000
Operating Expenses:		
Salaries Expense	$ 80,000	
Rent Expense	24,000	
Depreciation Expense—Furniture	9,000	
Utilities Expense	3,000	
Total Operating Expenses		(116,000)
Net Income		$ 14,000

Sales Revenue − Cost of Goods Sold = Gross Profit

Gross Profit − Operating Expenses = Net Income



Merchandiser Financial Statements

Merchandising Company
Income Statement
Year Ended December 31, 2015

Sales Revenue		$ 230,000
Cost of Goods Sold		(100,000)
Gross Profit		130,000
Operating Expenses		
Salaries Expense	$ 80,000	
Rent Expense	24,000	
Depr Exp—Furniture	9,000	
Utilities Expense	3,000	
Total expenses		(116,000)
Net income		$ 14,000

Cost of Goods Sold (COGS)

- The cost of the Merchandise inventory that the business has sold to customers (cost of sales)
- Largest E in Merchandiser

Gross Profit

Calculated as:

Net Sales—COGS

Unique Financial Statements of Merchandiser

Can you find any differences?

- Merchandise Inventory (CA) is usually the only type of inventory.
- Merchandise Inventory is usually purchased on credit, so Accounts Payable (CL) may also be higher than a Service Company.

SERVICE COMPANY Balance Sheet (Partial) December 31, 2015			MERCHANDISING COMPANY Balance Sheet (Partial) December 31, 2015		
Assets			**Assets**		
Current Assets:			Current Assets:		
Cash	$ 34,000		Cash	$ 34,000	
Accounts Receivable	10,800		Accounts Receivable	10,800	
Office Supplies	800		Merchandise Inventory	60,000	
Prepaid Rent	2,100		Office Supplies	800	
Total Current Assets		$ 47,700	Prepaid Rent	2,100	
			Total Current Assets		$ 107,700

Merchandise Inventory is included in a merchandising company's current assets.

Main types of Merchandise Inventory systems

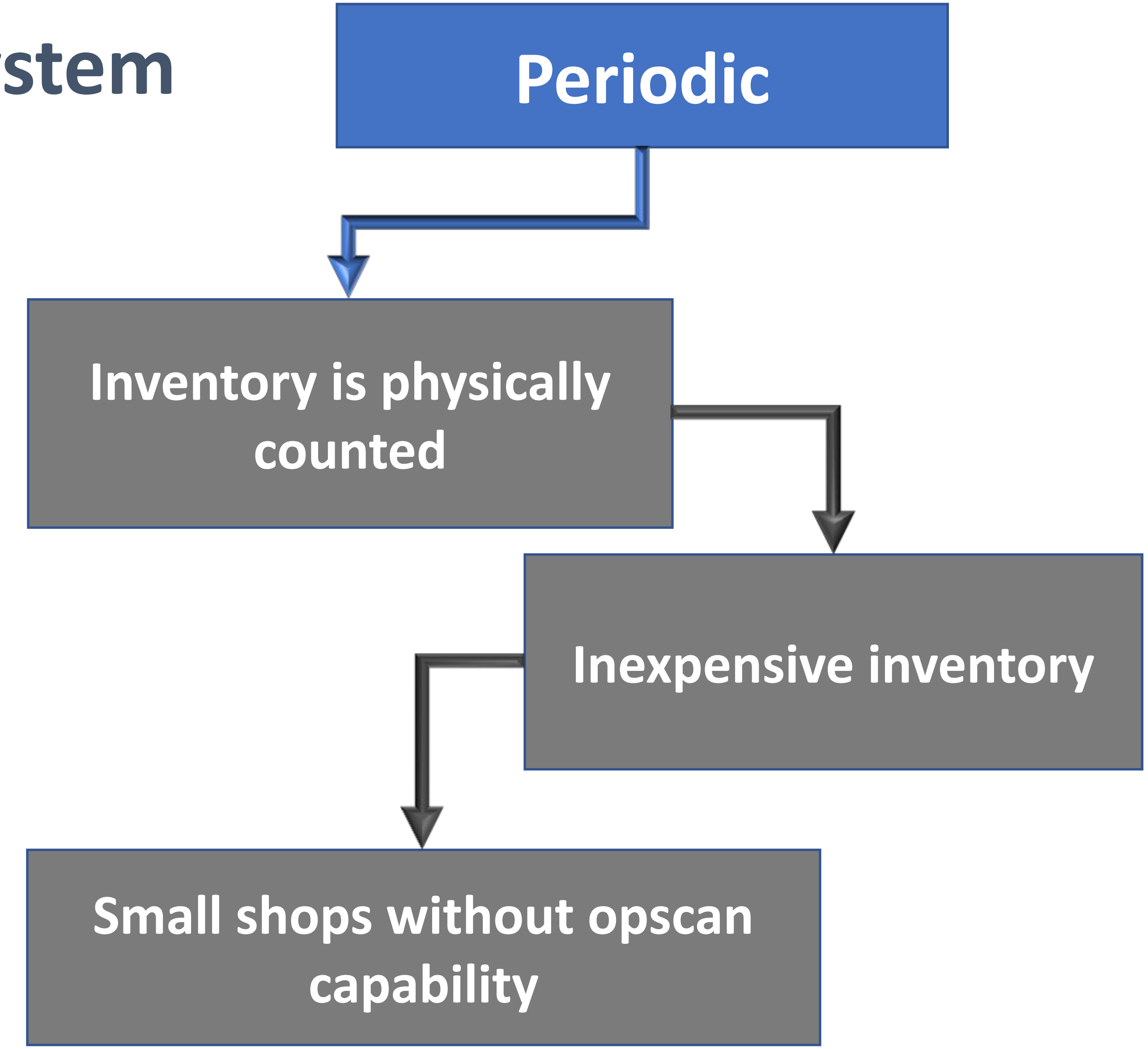
Periodic Inventory System

- This system requires businesses to obtain a physical count of inventory to determine the quantities on hand.
- small, local store without optical-scanning
- local Restaurants and small retail stores

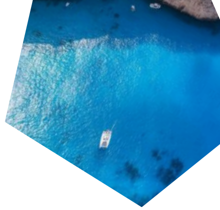
Perpetual Inventory System

- An inventory system that keeps a running computerized record of merchandise inventory.
- the data of inventories are perpetually (constantly) updated.
- Cost but achieves better control over the inventory.
- Still must do the physical count (for misplaced, stolen, or damaged inventory)

Periodic Inventory System



As computer technology takes over more and more accounting, the Periodic Method is used less and less.



Perpetual Inventory System

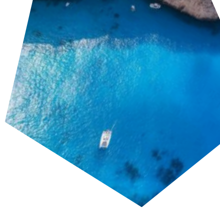
Perpetual

Every inflow and outflow is tracked in real time

Merchandising and purchase systems are integrated with the accounting system

Inventory is constantly updated.
Modern Perpetual Inventory System records:

- Units purchased and cost amounts.
- Units sold and sales and cost amounts.
- The quantity of merchandise inventory on hand and its cost.



Merchandise Inventory systems

PERPETUAL INVENTORY SYSTEM

Purchased inventory on account:

Date	Accounts and Explanation	Debit	Credit
	Merchandise Inventory	5,250	
	Accounts Payable		5,250
	Purchased inventory on account.		

Returned inventory to seller (vendor):

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	1,750	
	Merchandise Inventory		1,750
	Returned inventory to seller (vendor).		

Paid a freight bill on a purchase:

Date	Accounts and Explanation	Debit	Credit
	Merchandise Inventory	60	
	Cash		60
	Paid a freight bill.		

Paid merchandise invoice within discount period:

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	3,500	
	Cash		3,395
	Merchandise Inventory		105
	Paid within discount period.		

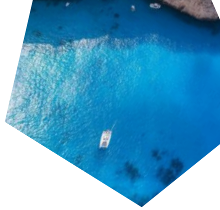
PERIODIC INVENTORY SYSTEM

Date	Accounts and Explanation	Debit	Credit
	Purchases	5,250	
	Accounts Payable		5,250
	Purchased inventory on account.		

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	1,750	
	Purchase Returns and Allowances		1,750
	Returned inventory to seller (vendor).		

Date	Accounts and Explanation	Debit	Credit
	Freight In	60	
	Cash		60
	Paid a freight bill.		

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	3,500	
	Cash		3,395
	Purchase Discounts		105
	Paid within discount period.		



Practice Questions

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S5-1 Comparing periodic and perpetual inventory systems

For each statement below, identify whether the statement applies to the periodic inventory system or perpetual inventory system.

a. Normally used for relatively inexpensive goods.

b. Keeps a running computerized record of merchandise inventory.

c. Achieves better control over merchandise inventory.

d. Requires a physical count of inventory to determine the quantities on hand.

e. Uses bar codes to keep up-to-the-minute records of inventory.

Practice Questions

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d. Requires a physical count of inventory to determine the quantities on hand.

e. Uses bar codes to keep up-to-the-minute records of inventory.

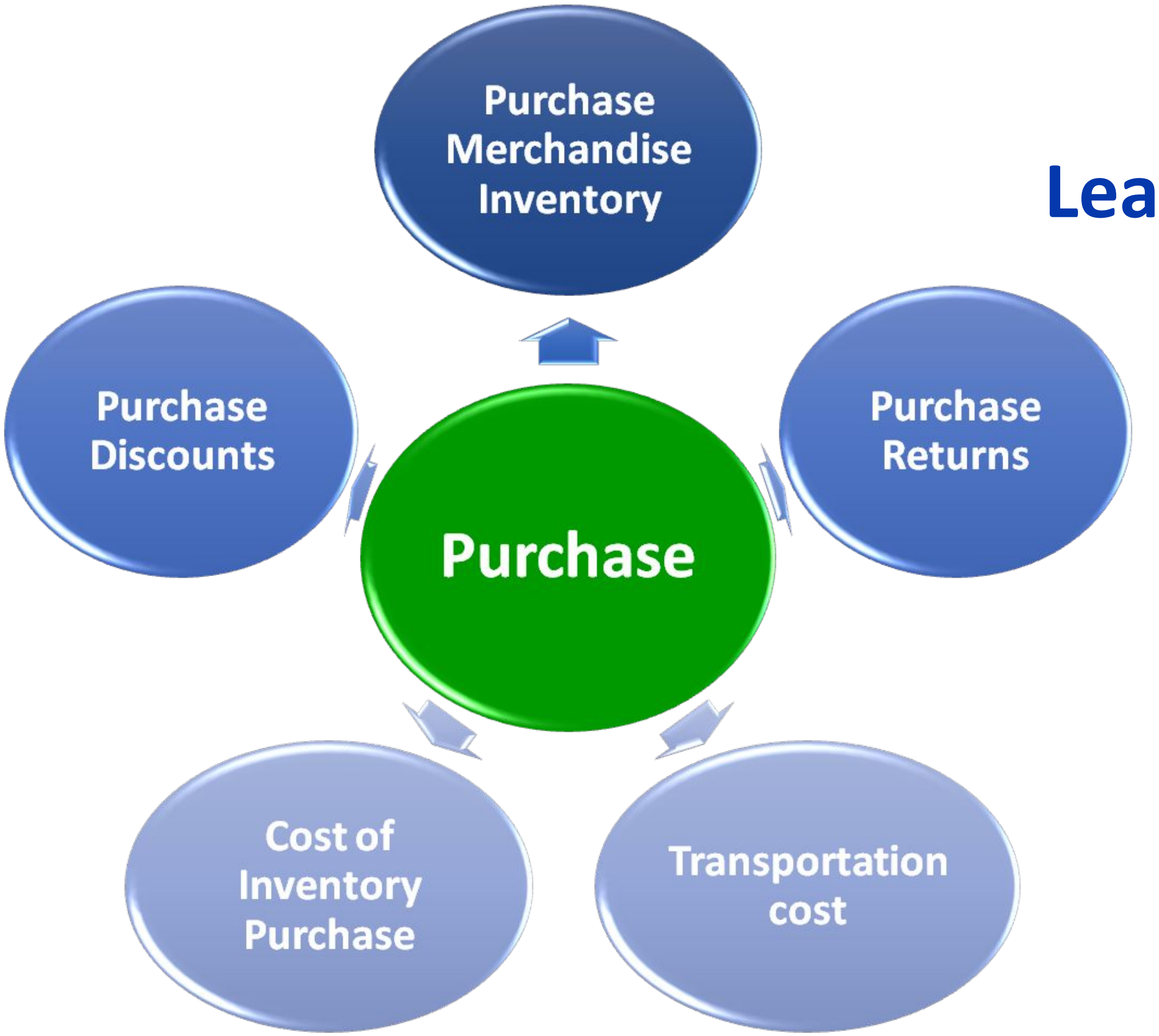
a. Periodic

b. Perpetual

c. Perpetual

d. Periodic

e. Perpetual



Learning Objectives 2

Purchase of merchandise inventory using perpetual inventory system

Smart Touch Learning Example

- Smart Touch Learning has now decided to discontinue its service business and instead plans to sell <u>touch screen tablet computers</u> that are preloaded with its e-learning software programs. Smart Touch Learning will purchase these tablets from a vendor.
- the cycle of a merchandising entity begins with the **purchase of merchandise inventory.**
  - The vendor (Southwest Electronics Direct) ships the tablet computers to Smart Touch Learning and sends an invoice the same day.
  - After the merchandise inventory is received, Smart Touch Learning pays the vendor.

Exhibit 5-3 | Purchase Invoice

1

Southwest Electronics Direct
P.O. BOX 101010
HOUSTON, TX 77212

3

Invoice	
Date	Number
6/1/15	410

2

Shipped To: SMART TOUCH LEARNING
281 WAVE AVE
NICEVILLE, FL 32578

4

Credit Terms
3/15, NET 30 DAYS

	Description		Quantity Shipped	Unit Price	Total
	Touch Screen Tablet Computers		100	$ 350	$35,000
				6 Pd.	6/15/15

Due Date & Due Amount	
06/16/15	07/01/2015
$33,950	$35,000.00

7

Sub Total	$35,000
Ship. or Handl. Chg.	–
Tax (3%)	–
Total(s)	$35,000

5

Explanations:

1. The seller is Southwest Electronics Direct
2. The purchaser is Smart Touch Learning.
3. The invoice date is needed to determine whether the purchaser gets a discount for prompt payment (see 4).
4. Credit terms: If Smart Touch pays within 15 days of the invoice date, it can deduct a 3% discount. Otherwise, the full amount—NET—is due in 30 days.
5. Total invoice amount is $35,000.
6. Smart Touch's payment date. How much did Smart Touch pay? (see 7).
7. Payment occurred 14 days after the invoice date—within the discount period—so Smart Touch paid $33,950 ($35,000–3% discount).

1. Purchase Inventory by cash

Assume Smart Touch Learning receives the goods on June 3, 2015 and makes payment on that date

Date	Accounts and Explanation	Debit	Credit
June 3	Merchandise Inventory	35,000	
	Cash		35,000
	Purchased inventory for cash.		

1. Purchase inventory on Account

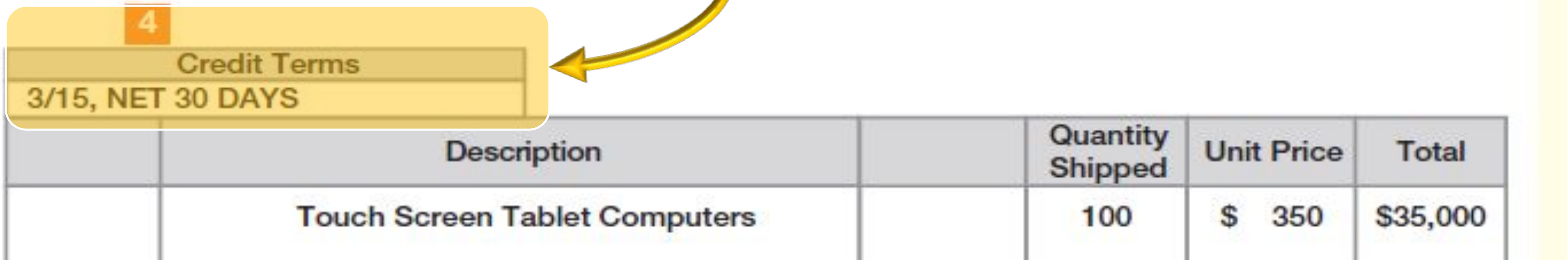
If we had received the inventory on June 3,

but chosen to pay later . . .

Date	Accounts and Explanation	Debit	Credit
June 3	Merchandise Inventory	35,000	
	Accounts Payable		35,000
	Purchased inventory on account.		

2. Purchase Discounts

- **Many businesses offer purchases a discount for early payment.**
- **Invoices that accompany credit purchases often indicate "credit terms," which offer the buyer discount if they pay early.**

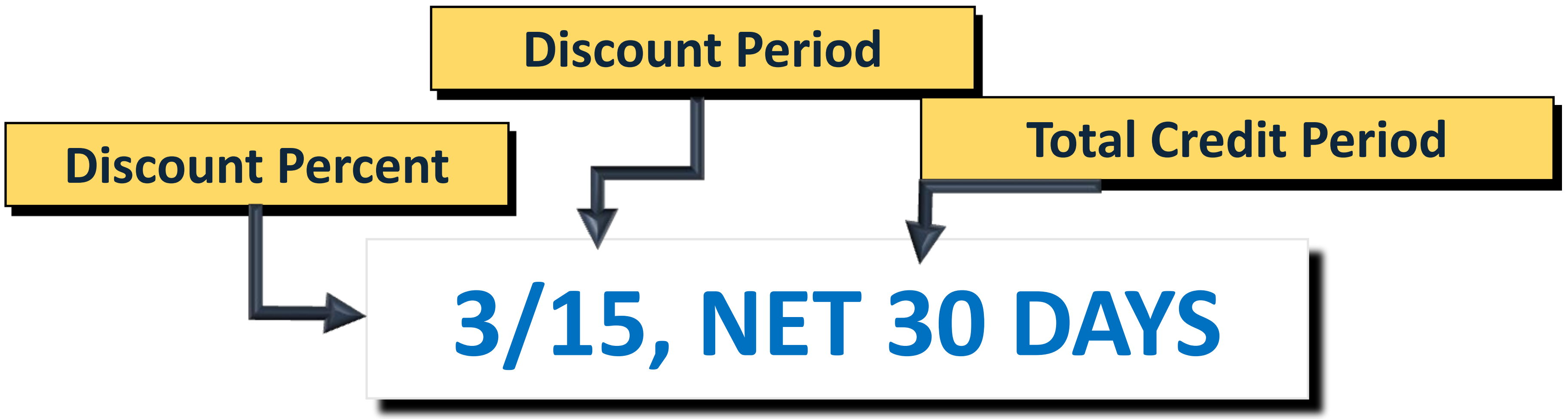

4

Credit Terms
3/15, NET 30 DAYS

	Description		Quantity Shipped	Unit Price	Total
	Touch Screen Tablet Computers		100	$ 350	$35,000

2. Purchase Discounts

The discount amount is determined by the “credit terms” indicated on the invoice.



- Discount %: purchasers as an incentive for early payment; the seller is in need of positive cash inflow
- Discount period: the company can deduct 3% from the total bill if it pays within 15 days.
- NET 30 days: is due in 30 days. Pay the full amount of the bill.
- EOM: means payment is due at the end of the current month.

2. Purchase Discounts

If Smart Touch Learning pays within the 15 day period, they get a 3% discount of the total bill (excluding freight charges).

Date	Accounts and Explanation	Debit	Credit
June 15	Accounts Payable	35,000	
	Cash		33,950
	Merchandise Inventory		1,050
	Paid within discount period.		

Merchandise Inventory

June 3	35,000	1,050	June 15
Bal.	**33,950**		

Accounts Payable

June 15	35,000	35,000	June 3
Bal.	**0**		

What if Smart Touch Learning pays this invoice on June 24,2015？

3. Purchase Returns and Allowances

- **Purchase Return**: A situation in which sellers allow purchasers to return merchandise that is defective, damaged, or otherwise unsuitable.
- **Purchase Allowance**: An amount granted to the purchaser as an incentive to keep goods that are not “as ordered.”

- When all or a portion of a purchase is returned to the seller, it is recorded as a reduction of the merchandise inventory account.

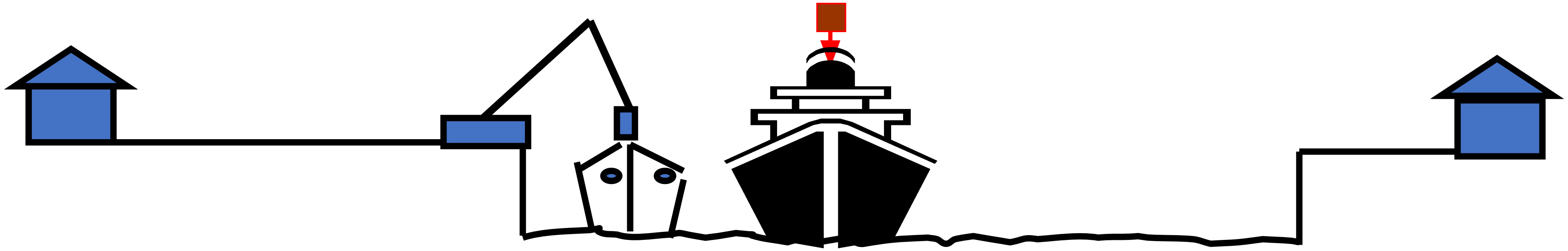
3. Purchase Returns and Allowances

Assume that Smart Touch Learning has not yet paid the original bill of June 1. Suppose 20 of the tablets were damaged in shipment. On June 4, Smart Touch Learning returns the goods valued at \$7,000(\$350×20) to the vendor and records the purchase return as follows:

Date	Accounts and Explanation	Debit	Credit
June 4	Accounts Payable	7,000	
	Merchandise Inventory		7,000
	Returned inventory to seller(vendor).		

4. Transportation Costs

- When goods are in transit from the seller to the buyer, an issue arises as to who bears the risk of loss in the event that the inventory becomes lost or damaged while in the custody of the third-party shipper.
- The purchase agreement specifies FOB (free on board) terms to determine when title to the goods transfers to the purchaser and who pays the freight.



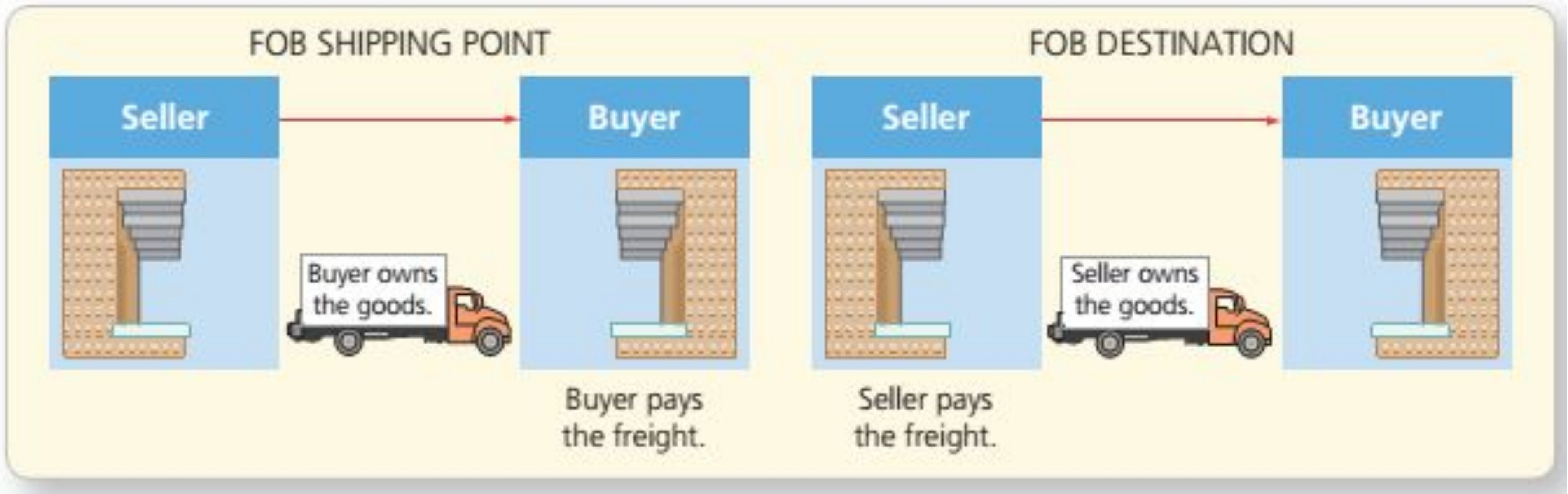
4. Transportation Costs

The purchase agreement specifies that **either the seller or the buyer must pay the transportation cost and assign the risk of loss.**

- **FOB shipping point:** the buyer takes ownership (title) to the goods after the goods leave the seller’s place of business (shipping point). In most cases, the buyer (owner of the goods) also pays the freight.
- **FOB destination:** the buyer takes ownership (title) to the goods at the delivery destination point. In most cases, the **seller** (owner of the goods while in transit) usually pays the freight.

4. Transportation Costs

- While goods are in transit, rules are necessary to determine who bears the risk of loss.
- **Freight costs** are either **freight in** or **freight out**.



Freight In

- **Freight in** is the transportation cost to ship goods into the purchaser's warehouse; thus, it is freight on purchased goods.
- Under FOB shipping point, the buyer owns the goods while they are in transit, so the buyer pays the freight.
- Because the freight is a cost that must be paid to acquire the inventory, **Freight In becomes part of the cost of merchandise inventory.**
- Assume ST Learning pays a $60 freight charge on the June 3 purchase.

Date	Accounts and Explanation	Debit	Credit
June 3	Merchandise Inventory	60	
	Cash		60
	Paid a freight bill.		

Merchandise Inventory Account

Merchandise Inventory

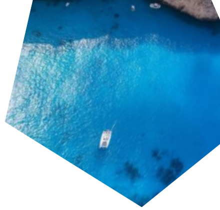
June 3	35,000	7,000	June 4
June 3	60	1,050	June 15
	27,010		

The merchandise inventory account will reflect the net results of all the transactions for the period.

- Purchase
- Purchase allowance
- Purchase Discount
- Transportation cost (freight in)

Freight In Within Discount Period

- Under FOB shipping point, the seller sometimes prepays the transportation cost as a convenience and lists this cost on the invoice.
- Discounts are not computed on the transportation costs because there is no discount on freight.
- Only the cost of transporting inventory into the buyer’s place of business is considered part of the cost of the inventory.



Freight In Within Discount Period

- Assume, for example, ST Learning makes a $5,000 purchase of goods and related freight charge of $400, on June 20 on account with terms of 3/5, n/30. The seller prepays the freight charge.
- If ST Learning pays within the discount period, the discount will be computed only on the $5,000 merchandise cost, not on the total invoice of $5,400.

Date	Accounts and Explanation	Debit	Credit
Jun. 20	Merchandise Inventory ($5,000 + $400)	5,400	
	Accounts Payable		5,400
	Purchased inventory on account, including freight.		

Date	Accounts and Explanation	Debit	Credit
Jun. 25	Accounts Payable	5,400	
	Cash ($5,400 − $150)		5,250
	Merchandise Inventory ($5,000 × 0.03)		150
	Paid within discount period, including freight.		

Cost of Inventory Purchased

Net Cost of Inventory Purchased = Purchase cost of inventory − Purchase returns and allowances − Purchase discounts + Freight in

Suppose that during the year, Smart Touch Learning buys $281,750 of inventory, returns $61,250 of the goods, and takes a $4,410 early payment discount. The company also pays $14,700 of freight in. Calculate net cost of the inventory purchased.

Merchandise Inventory

281, 750	61, 250
14, 700	4, 410
230, 790	

Purchases	$ 281,750
Less: Purchase Returns and Allowances	61,250
Purchase Discounts	4,410
Plus: Freight In	14,700
Net Cost of Inventory Purchased	$ 230,790

Practice Questions

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Journalizing purchase transactions

Consider the following transactions for Dady Drug Store:

Mar. 2	Dady buys $20,250 worth of inventory on account with credit terms of 3/15, n/30, FOB shipping point.
3	Dady pays a $90 freight charge.
8	Dady returns $5,000 of the merchandise due to damage during shipment.
14	Dady paid the amount due, less return and discount.

Requirements

1. Journalize the purchase transactions. Explanations are not required.
2. In the final analysis, how much did the inventory cost Dady?

Practice Questions - Solution

Date	Accounts and Explanation	Debit	Credit
Mar. 2	Merchandise Inventory	20,250	
	Accounts Payable		20,250
	Purchased inventory on account		
Mar. 3	Merchandise Inventory	90	
	Cash		90
	Paid a freight bill		
Mar. 8	Accounts Payable	5,000	
	Merchandise Inventory		5,000
	Returned inventory to vender		
Mar. 14	Accounts Payable (\$20,250 − \$5,000)	15,250	
	Cash (\$15,250 – \$458)		14,792
	Merchandise Inventory (\$15,250 × 0.03)		458
	Paid within disount period net of return		

The inventory cost for Dady is \$14,882 = (\$20,250 + \$90 – \$5,000 – \$458)

Learning Objectives 3

Account for the sale of merchandise inventory using a perpetual inventory system

1. Sale of Merchandise Inventory

In a perpetual system, two entries must be made for every sale

1. Record the sale

    Cash (or AR) Dr

    Sales(Sales R) Cr

2. Record the reduction of inventory

    Cost of Goods Sold (COGS) Dr

    Merchandise Inventory Cr

Exhibit 5-5 Sales Invoice

Date: June 19, 2015

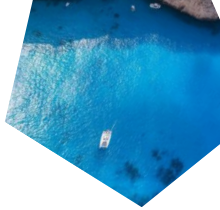
Invoice #582

STL SMART TOUCH LEARNING

281 Wave Ave

Niceville, FL 32578

Quantity	Item	Unit Price	Total
2	Touch Screen Tablet Computers	$500	$1,000
Total			$1,000



1. Recording a Cash Sale

Smart Touch Learning sold 2 tablets for $1,000 cash. The cost of those tablets was $700.

Date	Accounts and Explanation	Debit	Credit
June 19	Cash	1,000	
	Sales Revenue		1,000
	Cash sale.		
June 19	Cost of Goods Sold	700	
	Merchandise Inventory		700
	Recorded the cost of goods sold.		

Matching principle : all expenses are recorded when they are incurred during the period. Expenses are matched against the revenues of the period.

1. Recording a Credit Sale

Smart Touch Learning sold 10 tablets for $500 each on account. Sales terms are 2/10, n/30. The cost of those tablets was $3,500.

Date	Accounts and Explanation	Debit	Credit
June 21	Accounts Receivable	5,000	
	Sales Revenue		5,000
	Sale on account.		
June 21	Cost of Goods Sold	3,500	
	Merchandise Inventory		3500
	Recorded the cost of goods sold.		

2. Sales Returns and Allowances

- Sometimes, companies may have customers that return goods, asking for a refund or deducted the total amount .
- Sales Returns and Allowances: The return of goods or granting of an allowance. Such an allowance reduces the future cash collected from the customer.
- It is a contra account to ‘Sales’, and has a normal debit balance.

2. Sales Returns Example

- Assume that the customer has not yet paid the original bill of June 21. Suppose, on June 25, the customer returns 3 tablets that sold for $1,500 and originally cost $1,050.
- If ST learning accept a return, in a perpetual system, we also need to make two entries.

Record sales returns

Record return of the inventory

Date	Accounts and Explanation	Debit	Credit
June 25	Sales Returns and Allowances	1,500	
	Accounts Receivable		1,500
	Received returned goods.		
June 25	Merchandise Inventory	1,050	
	Cost of Goods Sold		1050
	Placed goods back in inventory.		

accounting

2. Sales Allowances Example

When a seller grants a sales allowance, there are no returned goods from the customer. Therefore, there is no second entry to adjust the Merchandise Inventory account.

Suppose that on June 28 Smart Touch Learning grants a $100 sales allowance for goods damaged in transit.

Date	Accounts and Explanation	Debit	Credit
June 28	Sales Returns and Allowances	100	
	Accounts Receivable		100
	Granted a sales allowance for damaged		
	goods.		

3. Sales Discounts after Sales Return

Many sellers offer customers a discount for early payment. Sales discounts is a *contra account* to Sales.

If sales returns and allowances occur before the discount period has expired, any discount would be calculated net of the returns and allowances.

The customer pays ST Learning on June 30, 9 days after the invoice date, and after the return and the allowance.

Accounts Receivable

June 21	5,000	1,500	June 25
		100	June 28
Bal.	**3,400**		

Date	Accounts and Explanation	Debit	Credit
June 30	Cash	3,332	
	Sales Discounts	68	
	Accounts Receivable		3,400
	Cash collection within the discount		
	period net of the return and allowance		

4. Transportation Cost - Freight Out

- The **freight in** is part of the inventory cost for the buyer.
- The **freight out** is a delivery expense to the seller.
- Smart Touch Learning pays $30 to ship the June 21 sale to the customer.

Date	Accounts and Explanation	Debit	Credit
June 21	Delivery Expense	30	
	Cash		30
	Paid a freight bill.		

Homework

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> Try It!

7. Click Computers has the following transactions in July related to the purchase of merchandise inventory.

July 1	Purchase of $20,500 worth of computers on account, terms of 2/10, n/30.
3	Return of $4,000 of the computers to the vendor.
9	Payment made on account.

Journalize the purchase transactions for Click Computers.

Check your answer at the end of the chapter.

Homework

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S5-5 Journalizing purchase and sales transactions

Suppose Piranha.com sells 2,500 books on account for $15 each (cost of these books is $22,500), credit terms 2/15, n/60 on October 10, 2015, to The Textbook Store. One hundred of these books (cost $900) were damaged in shipment, so Piranha.com later received the damaged goods from The Textbook Store as sales returns on October 13, 2015. The Textbook Store paid the balance to Piranha.com on October 22, 2015.

Requirements

1. Journalize The Textbook Store's October 2015 transactions.
2. Journalize Piranha.com's October 2015 transactions.


Keep up
the good work!