Chapter 9

MATERIALS: CONTROLLING, COSTING, AND PLANNING

MULTIPLE CHOICE

Question Nos. 23-27, 30, 31, and 38-40 are AICPA adapted.
Question No. 22 is CIA adapted.

A **1.** **The cycle of materials procurement and use includes all of the following steps *except* for:**
- **A. determining the cost of goods sold**
- **B. the production budget**
- **C. preparing the receiving report**
- **D. maintaining the materials ledger**
- **E. engineering to determine materials specifications**

E **2.** **In a well-controlled materials system, the Purchasing Department performs all of the following activities *except* the:**
- **A. placing of purchase orders with suppliers**
- **B. receiving of purchase requisitions**
- **C. maintaining of information on market prices for goods used**
- **D. preparation of purchase orders**
- **E. approving and checking of invoices**

B **3.** **The purchase requisition is a document used to:**
- **A. initiate the return of merchandise to the vendor**
- **B. inform the purchasing agent of a need for a materials item**
- **C. initiate payment for merchandise received**
- **D. inform the Purchasing Department of a receipt of goods**
- **E. authorize the vendor to supply merchandise or materials**

B **4.** **The expense that theoretically is not a correct part of inventory cost is:**
- **A. freight-in**
- **B. freight-out**
- **C. inspection costs**
- **D. accounting costs for materials received**
- **E. purchasing costs**

C **5.** **Theoretically, cash discounts permitted on purchased raw materials should be:**
- **A. added to other income, whether taken or not**
- **B. added to other income, only if taken**
- **C. deducted from inventory, whether taken or not**
- **D. deducted from inventory, only if taken**
- **E. none of the above**

E 6. The materials requisition:
- **A. is the list of materials requirements for each step in the production sequence**
- **B. informs the purchasing agent of the quantity and kind of materials needed**
- **C. contracts for quantities to be delivered**
- **D. certifies quantities received and reports results of inspection and testing**
- **E. authorizes the storeroom to deliver types and quantities of materials to a given department**

C 7. The purchase order:
- **A. is the list of materials requirements for each step in the production sequence**
- **B. informs the purchasing agent of the quantity and kind of materials needed**
- **C. contracts for quantities to be delivered**
- **D. certifies quantities received and reports results of inspection and testing**
- **E. authorizes the storeroom to deliver types and quantities of materials to a given department**

A 8. The bill of materials:
- **A. is the list of materials requirements for each step in the production sequence**
- **B. informs the purchasing agent of the quantity and kind of materials needed**
- **C. contracts for quantities to be delivered**
- **D. certifies quantities received and reports results of inspection and testing**
- **E. authorizes the storeroom to deliver types and quantities of materials to a given department**

D 9. The receiving report:
- **A. is the list of materials requirements for each step in the production sequence**
- **B. informs the purchasing agent of the quantity and kind of materials needed**
- **C. contracts for quantities to be delivered**
- **D. certifies quantities received and reports results of inspection and testing**
- **E. authorizes the storeroom to deliver types and quantities of materials to a given department**

D 10. The purchasing department performs all of the following functions *except:*
- **A. receives purchase requisitions for materials, supplies, and equipment**
- **B. keeps informed concerning sources of supply, prices, and delivery schedules**
- **C. prepares and places purchase orders**
- **D. compares quantities received with the suppliers' packing list**
- **E. arranges for the reporting among the purchasing, receiving, and accounting departments**

C 11. The purchase requisition may originate with all of the following *except:*
- **A. a storeroom employee**
- **B. a materials record clerk**
- **C. a receiving department clerk**
- **D. a research, engineering, or other department employee who needs materials of a special nature**
- **E. a computer**

B 12. The receiving department does all of the following *except:*
- **A. unloads and unpacks incoming materials**
- **B. keeps informed concerning sources of supply, prices, and delivery schedules**
- **C. matches materials received with descriptions on purchase orders**
- **D. arranges for inspection, when necessary**
- **E. routes accepted materials to the appropriate departments**

A **13.** **A cost of having too few items on hand in inventory is:**
- **A. frequent stockouts**
- **B. excessive insurance costs**
- **C. payment of additional warehouse space**
- **D. spoilage costs**
- **E. costs of obsolescence**

B **14.** **Of the following, the expense that is *not* relevant to determining the most economic quantity to order is:**
- **A. additional costs to store inventory**
- **B. rental of warehouse space under a ten-year lease**
- **C. interest expense of financing purchases**
- **D. spoilage costs**
- **E. variable costs of placing an order**

B **15.** **A company has been ordering more than the economic order quantity. This would result in:**
- **A. more frequent order points**
- **B. carrying costs greater than order costs**
- **C. equal safety stock costs and carrying costs**
- **D. carrying costs less than order costs**
- **E. insufficient safety stock costs**

B **16.** **Annual demand for squash racquets is 50,000 units, and carrying costs amount to $2 per unit. Order costs for the company amount to $5. The optimum order quantity in units for squash racquets is (rounded to the nearest unit):**
- **A. 191**
- **B. 500**
- **C. 250**
- **D. 100**
- **E. 625**

SUPPORTING CALCULATION:

$$\text{square root}\left(\frac{2 \_ 50{,}000 \_ \$5}{\$2}\right) = 500$$

E **17.** **A company orders 10,000 units (a one-year supply) of Zap at one time. Zap costs $1 per unit, and order costs amount to $500 each time an order is placed. The costs to carry Zap in inventory amount to 20% of the materials cost. For an entire year, the inventory carrying costs and order costs are:**
- **A. $2,000**
- **B. $200**
- **C. $500**
- **D. $1,000**
- **E. $1,500**

SUPPORTING CALCULATION:

$$\frac{10{,}000 \_ \$500}{10{,}000} + \frac{\$1 \_ .20 \_ 10{,}000}{2} = \$1{,}500$$

B 18. If the average lead time and usage figures are used for determining the order point, then the probability of a stockout is:
- **A. .005%**
- **B. 50%**
- **C. 5%**
- **D. 100%**
- **E. 2.5%**

A 19. There are 1,000 Trolls in stock, and 1,500 are due in from orders that were placed previously. The company sells Trolls at the rate of 100 per day and finds that it takes an average of 20 days for an order to be received. Because usage and lead times are known with certainty and because the company has determined that an order must be placed now, the desired safety stock quantity must be equal to:
- **A. 500 units**
- **B. 1,000 units**
- **C. 2,500 units**
- **D. 100 units**
- **E. 1,500 units**

SUPPORTING CALCULATION:

1,000 + 1,500 = (100 x 20) + SSQ

SSQ = 500

B 20. The use of quantitative models can be modified to improve the management of inventory by:
- **A. including only fixed costs in the EOQ analysis**
- **B. employing a minimum safety stock level because delivery time and inventory usage rates may vary**
- **C. purchasing inventory only once a year to save on ordering cost**
- **D. purchasing inventory monthly to save on carrying cost**
- **E. eliminating semivariable costs from any consideration in the EOQ analysis because of the difficulty of estimating those costs**

C 21. An inventory control technique that reviews quantities on hand periodically and orders sufficient quantities to bring inventory up to a desired level expressed as a number of days' or weeks' supply is the:
- **A. two-bin method**
- **B. ABC inventory control method**
- **C. order cycling method**
- **D. min-max method**
- **E. automatic order point system**

B 22. The factor that need *not* be considered when calculating an inventory economic order quantity (EOQ) is:
- **A. annual sales of a product**
- **B. safety stock level**
- **C. order-placing costs**
- **D. storage costs**
- **E. risk of inventory obsolescence and deterioration**

B 23. Brad Company has correctly computed its economic order quantity as 500 units. However, management would rather order in quantities of 600 units. How will Brad's total annual purchase order cost and total annual carrying cost for an order quantity of 600 units compare to the respective amounts for an order quantity of 500 units?

A. higher purchase order cost and lower carrying cost
B. lower purchase order cost and higher carrying cost
C. higher purchase order cost and higher carrying cost
D. lower purchase order cost and lower carrying cost
E. none of the above

A 24. Carter Company buys a certain part for its manufacturing process for $20 a part and needs 10,000 parts a year. It costs $3 a year to carry one of these parts in inventory. The cost of placing a purchase order for these parts is $15. Assuming that the parts will be required evenly throughout the year, the formula for the economic order quantity is the square root of:

A. $\frac{2 \_ 10{,}000 \_ 15}{3}$

B. $\frac{10{,}000 \_ 3}{15}$

C. $\frac{10{,}000 \_ 15}{3}$

D. $\frac{2 \_ 10{,}000 \_ 3}{15}$

E. none of the above

A 25. For its economic order quantity model, a company has a $10 cost of placing an order and a $2 annual cost of carrying one unit in stock. If the cost of placing an order increases by 20%, the annual cost of carrying one unit in stock increases by 25%, and all other considerations remain constant, the economic order quantity will:

A. decrease
B. increase
C. remain unchanged
D. either increase or decrease, depending on the reorder point
E. either increase or decrease, depending on the safety stock

C 26. For inventory management, ignoring safety stocks, a valid computation of the reorder point is:

A. order costs plus carrying costs
B. the square root of the anticipated demand during lead time
C. the anticipated demand per day during lead time times lead time in days

D. the economic order quantity
E. the economic order quantity times the anticipated demand during lead time

C 27. The Cappalari Company wishes to determine the amount of safety stock that it should maintain for Product D to result in the lowest cost. The following information is available:

Stockout cost	**$ 80 per occurrence**
Carrying cost of safety stock	**$ 2 per unit**
Number of purchase orders	**5 per year**

The options available to Cappalari are as follows:

Units of Safety Stock	Probability of Running out of Safety Stock
10	50%
30	30%
50	10%
55	5%

The number of units of safety stock that will result in the lowest cost is:

A. 30
B. 50
C. 55
D. 10
E. none of the above

SUPPORTING CALCULATION:

Safety Stock	Expected Stockouts	Stockout Cost	Carrying Cost	Stockout and Carrying Cost
10	2.5	$200	$ 20	$220
30	1.5	120	60	180
50	.5	40	100	140
55	.25	20	110	130

B 28. The following information is available for Odyssey Company's Material Y:

Annual usage in units	**10,000**
Working days per year	**250**
Normal lead time in working days	**30**
Maximum lead time in working days	**70**

Assuming that the units of Material Y will be required evenly throughout the year, the order point would be:

A. 2,000
B. 2,800
C. 2,105
D. 1,200
E. 1,600

SUPPORTING CALCULATION:

[(10,000 ÷ 250) x 30] + [(70 - 30) x 40]
30 (10,000 ÷ 250) + 40 (70 - 30) = 2,800

A 29. The following information relates to Hudson Company's Material A:

Annual usage in units	**7,200**
Working days per year	**240**
Normal lead time in working days	**20**
Maximum lead time in working days	**45**

Assuming that the units of Material A will be required evenly throughout the year, the safety stock and order point would be:

	Safety Stock	Order Point
A.	**750**	**1,350**
B.	**600**	**750**
C.	**600**	**1,350**
D.	**750**	**600**
E.	**none of the above**	

SUPPORTING CALCULATION:

Safety Stock: (7,200 ÷ 240) (45 - 20) = 750
Order Point: 20 (7,200 ÷ 240) + 750 = 1,350

C 30. Penguin Company manufactures winter jackets. Setup costs are $2.00. Penguin manufactures 4,000 jackets evenly throughout the year. Using the economic order quantity approach, the optimal production run would be 200 when the cost of carrying one jacket in inventory for one year is:

A. $0.10
B. $0.20
C. $0.40
D. $0.05
E. none of the above

SUPPORTING CALCULATION:

$$\text{square root}\left(\frac{2 \_ 4{,}000 \_ \$2}{CC}\right) = 200$$

$$CC = \$.40$$

A 31. The following data refer to various annual costs relating to the inventory of a single-product company:

Unit transportation-in on purchases	**$ .20**
Storage per unit	**.12**
Insurance per unit	**10**
Annual interest foregone from alternate investment of funds	**$ 800**
Annual number of units required	**10,000**

What is the annual carrying cost per unit?

A. $.30
B. $.42
C. $.50
D. $.32
E. $.22

SUPPORTING CALCULATION:

$$\$.12 + \$.10 + \frac{\$800}{10{,}000} = \$.30$$

D 32. Bliss Company has an order point at 1,400 units, usage during normal lead time of 600 units, and an EOQ of 2,000 units. Its maximum inventory, assuming normal lead time and usage, would be:

A. 3,400 units
B. 2,000 units
C. 1,200 units
D. 2,800 units
E. 4,000 units

SUPPORTING CALCULATION:

(1,400 - 600) + 2,000 = 2,800

A 33. The inventory model that follows the concept that 80% of the value of an inventory is in 20% of the inventory items is the:

A. ABC plan
B. economic order quantity (EOQ) model
C. just-in-time inventory system
D. materials requirements planning (MRP) system
E. zero inventory model

B 34. The materials control method that is based on the premise that the quantities of most stock items are subject to definable limits is the:

A. cycle review method
B. min-max method
C. two-bin method
D. ABC plan
E. none of the above

C 35. The materials control method that is based on physical observation that an order point has been reached is the:

A. cycle review method
B. min-max method
C. two-bin method
D. ABC plan
E. none of the above

The following questions are based on the Appendix to the chapter:

C 36. If the cost of goods sold computed when inventory is costed using the fifo method is less than when using the lifo method:

A. prices decreased
B. prices remained unchanged
C. prices increased
D. price trend cannot be determined from the information given
E. prices went up and down

A 37. The method of inventory pricing that best approximates specific identification of the actual flow of costs and units in most manufacturing situations is:

A. first-in, first-out
B. last-in, first-out
C. base stock
D. average cost
E. none of the above

D 38. The following information was available from the inventory records of the Anthony Company for January 19X7:

	Unit Units	Total Cost	Cost
Balance at January 1, 19X7	**2,000**	**$ 9.775**	**$19,550**
Purchases:			
January 6, 19X7	**1,500**	**10.300**	**15,450**
January 26, 19X7	**3,400**	**10.750**	**36,550**
Sales:			
January 7, 19X7	**1,800**		
January 31, 19X7	**3,200**		
Balance at January 31, 19X7	**1,900**		

Assuming that Anthony maintains perpetual inventory records, what should be the inventory at January 31, 19X7, using the average cost inventory method rounded to the nearest dollar?

A. $19,998
B. $19,523
C. $19,703
D. $19,950
E. none of the above

SUPPORTING CALCULATION:

$$1{,}900 \_ \frac{(1{,}700 \_ \$10) + (3{,}400 \_ \$10.75)}{5{,}100} = \$19{,}950$$

D 39. The following information was available from the inventory records of the Anthony Company for January 19X7:

	Units	Unit Cost	Total Cost
Balance at January 1, 19X7	**2,000**	**$ 9.775**	**$19,550**
Purchases:			
January 6, 19X7	**1,500**	**10.300**	**15,450**
January 26, 19X7	**3,400**	**10.750**	**36,550**
Sales:			
January 7, 19X7	**1,800**		
January 31, 19X7	**3,200**		
Balance at January 31, 19X7	**1,900**		

Assuming that Anthony does not maintain perpetual inventory records, what should be the inventory at January 31, 19X7, using the average cost inventory method rounded to the nearest dollar?

A. $19,950
B. $19,998
C. $19,523
D. $19,702
E. none of the above

SUPPORTING CALCULATION:

$$\frac{\$71,550}{6,900} \_ 1,900 = \$19,702$$

A 40. In a period of rising prices, using which of the following inventory cost flow methods would result in the highest ending inventory?

A. fifo
B. average cost
C. weighted average cost
D. moving average cost
E. lifo

A 41. The inventory cost flow method that involves computations based on broad inventory pools of similar items is:

A. dollar-value lifo
B. average cost
C. moving average
D. fifo
E. regular quantity of goods lifo

PROBLEMS

PROBLEM

1.

Applied Acquisition Costs. James Company Inc. records incoming materials at invoice price less cash discounts plus applied receiving and handling cost. For product Beta, the following data are available:

	Budgeted for the Month	Actual Cost for the Month
Freight-in and cartage-in	**$ 3,800**	**$ 3,750**
Purchasing Department cost	**7,150**	**7,075**
Receiving Department cost	**5,825**	**5,850**
Storage and handling	**6,130**	**6,100**
Testing, spoilage, and rejects	**3,345**	**3,850**
Total	**$ 26,250**	**$ 26,625**

The purchasing budget shows estimated net purchases of $175,000 for the month. Actual invoices net of discounts total $173,500 for the month.

Required:

(1) Determine the applied acquisition costing rate for the month.
(2) Determine the amount of applied cost added to materials purchased during the month.
(3) Indicate the amount of and the possible disposition of the variance.

SOLUTION

$$\frac{\text{Budgeted acquisition cost}}{\text{Budgeted purchases}} = \frac{\$26,250}{\$175,000} = 15\% \text{ applied acquisition costing rate for the month}$$

(1)

(2) $173,500 net purchases x 15% applied acquisition costing rate = 26,025 applied cost added to materials purchased during the month

(3) The underapplied acquisition cost of $600 (26,625 actual cost - 26,025 applied cost) should be debited to Cost of Goods Sold or prorated to Cost of Goods Sold and inventories.

PROBLEM

2.
Determination of Optimal Order Quantity. Micro Corp. uses 1,000 units of Chip annually in its production. Order costs consist of $10 for placing a long-distance call to make the order and $40 for delivering the order by truck to the company warehouse. Each Chip costs $100, and the carrying costs are estimated at 15.625% of the inventory cost.

Required:

(1) Compute the economic order quantity for Chip and the total order costs and carrying costs for the year.
(2) Determine the best order quantity if Chip is purchased only in multiples of 25 units. (Round answers to the nearest whole dollar.)

SOLUTION

$$(1) \qquad EOQ = \text{square root}\left(\frac{2\_RU\_CO}{CU\_CC}\right)$$

$$= \text{square root}\left(\frac{2\_1{,}000\_\$50}{\$100\_.15625}\right)$$

$$= \text{square root}\ 6{,}400$$

$$= 80$$

$$\frac{RU\_CO}{EOQ} = \frac{1{,}000\_\$50}{80} = \$625 \text{ order cost}$$

$$EOQ\_CU\_CC = \ \_80\_\$100\_.15625 = \$625 \text{ carrying cost}$$

(2) The best order quantity is 75. By process of elimination, try both 75 units and 100 units:

$$\frac{RU\_CO}{75} = \frac{1{,}000\_\$50}{75} = \$667 \text{ order cost}$$

S EOQ x CU x CC = S x 75 x $100 x .15625 =	**586**	**carrying cost**
	$ 1,253	**total cost**

Additional computations:

Order quantity at 100:

Order cost	**$ 500**
Carrying cost	**781**
Total	**$ 1,281**

PROBLEM

3.
Order Point, Inventory Levels, Ordering Cost. Charleston Company has developed the following data to assist in controlling one of its inventory items:

Economic order quantity	**1000**	**liters**
Average daily use	**100**	**liters**
Maximum daily use	**120**	**liters**
Working days per year	**250**	**days**
Safety stock	**140**	**liters**
Cost of carrying inventory	**$1.00**	**per liter per year**
Lead time	**7**	**working days**

Required: **Compute the following:**

(1) Order point
(2) Average inventory
(3) Maximum inventory assuming normal lead time and usage
(4) Cost of placing one order

SOLUTION

(1) Order point: 140 + (100 x 7 days) = 840 liters
(2) Average inventory: 140 + (1000/2) = 640 liters
(3) Normal maximum inventory: 140 + 1000 = 1140 liters
(4) Cost of placing one order (CO):

$$\text{EOQ} = \text{square root}\left(\frac{2\_\text{RU}\_\text{CO}}{\text{CU}\_\text{CC}\%}\right)$$

$$1{,}000 = \text{square root}\left(\frac{2\_25000\_\text{CO}}{\$1}\right)$$

$$1{,}000 = \text{square root}\,(\$50{,}000\_\text{CO})$$

$$1{,}000{,}000 = \$50{,}000\_\text{CO}$$

$$\text{CO} = \$20$$

PROBLEM

4.
Cost Saving by Use of EOQ. Warner Co. uses 6,000 units of material per year at a cost of $4 per unit. Carrying costs are estimated to be $1.125 per unit per year, and order costs amount to $60 per order. As an incentive to its customers, Warner will extend quantity discounts according to the following schedule:

Minimum Order	List Price	Discount	Net Price
500	$4	2%	$3.92
1,000	4	4	3.84
2,000	4	6	3.76

Required:

(1) Determine the economic order quantity (ignoring quantity discounts) and the total annual order cost, carrying cost, and materials costs at EOQ (considering quantity discounts).
(2) Compute the annual order cost, carrying cost, materials cost, and total cost at each discount level. (Round to the nearest dollar.)
(3) Identify the order size, choosing from one of the three discount levels, that will minimize the total cost.

SOLUTION

(1) $$\text{EOQ} = \text{square root}\left(\frac{2 \_ 6{,}000 \_ \$60}{\$1.125}\right) = 800 \text{ units per order}$$

Order cost + Carrying cost + Materials cost = Total cost

(6,000/800 x $60) + (800/2 x $1.125) + (6,000 x $3.92) = $450 + $450 + $23,520 = $24,420

(2)	**Size of order**	**500**	**1,000**	**2,000**
	Number of orders per year	**12**	**6**	**3**
	Average inventory	**250**	**500**	**1,000**
	Order cost	**$ 720**	**$ 360**	**$ 180**
	Carrying cost ($1.125 per unit)	**281**	**563**	**1,125**
	Materials cost:			
	6,000 x $3.92	**23,520**		
	6,000 x $3.84		**23,040**	
	6,000 x $3.76			**22,560**
	Total cost	**$ 24,521**	**$ 23,963**	**$ 23,865**

(3) The order size that will minimize the total cost is 2,000 units.

PROBLEM

5.
Determination of Optimal Size of a Production Run. Georgia Corp. produces fireworks in various forms. A cardboard tube, Part No. A86-E, is manufactured rather than ordered from an outside supplier. The company estimates that its need each year for this tube is 4,800 gross and that variable manufacturing costs are $60 per gross. Setup costs amount to $162 per production run, and storage costs are equal to 5% of variable manufacturing costs.

Required:

(1) Determine the optimal size of a production run and the total annual setup cost and total carrying cost at that size.
(2) Determine the optimal size of a production run, the total annual setup cost, and the total carrying cost, assuming that storage space is limited to 400 units.

SOLUTION

$$(1)\qquad \text{Optimal size} = \text{square root}\left(\frac{2 \_ \text{Annual usage} \_ \text{Setup cost}}{\text{Variable manufacturing cost} - \text{Storage cost percentage}}\right)$$

$$= \text{square root}\left(\frac{2 \_ 4{,}800 \_ \$162}{\$60 \_ 5\%}\right)$$

$$= \text{square root } 518{,}400$$

$$= 720 \text{ units}$$

$$\text{Total annual setup cost plus total carrying cost} = \left(\frac{4{,}800}{720}\right) \_ \$162 + \left(\frac{720}{2}\right) \_ (\$60 \_ 5\%)$$

$$= \$1{,}080 + \$1{,}080$$

$$= \$2{,}160$$

(2) The optimal size would have to be 400 units because total costs at any lot size below 400 units are greater. Costs at this size are:

$$\text{Total annual setup cost plus total carrying cost} = \left(\frac{4{,}800}{400}\right) \times \$162 + \left(\frac{400}{2}\right) \times (\$60 \times 5\%)$$

$$= \$1{,}944 + \$600$$

$$= \$2{,}544$$

PROBLEM

6.

Safety Stock. Jefferson & Sons Inc. would like to determine the safety stock to maintain for a product so that the lowest combination of stockout cost and carrying cost would result. Each stockout will cost $100; the carrying cost for each safety stock unit will be $2; the product will be ordered ten times a year. The following probabilities of running out of stock during an order period are associated with various safety stock levels:

Safety Stock Level	Probability of Stockout
25 units	50%
50	25
75	10
100	5

Required: **Determine the combined stockout and safety stock carrying cost associated with each level and the recommended level of safety stock.**

(AICPA adapted)

SOLUTION

Safety Stock Level	Annual Number of Orders	x	Probability of Stockout	=	Expected Annual Stockouts	x	Cost per Stockout	=	Annual Stockout Cost
25	10		.5		5		$100		$500
50	10		.25		2.5		100		250
75	10		.1		1		100		100
100	10		.05		.5		100		50

	Annual Safety Stock Carrying Cost ($2 per Unit)	=	Annual Combined Cost
	$ 50		$550
	100		350
	150		250
	200		250

The recommended level of safety stock is either 75 units or 100 units, since each have the same combined cost.

The following problem is based on the Appendix to the chapter.

PROBLEM

7.
Materials Costing Methods Using Materials Ledger Card. A company that uses a perpetual inventory system had the following transactions for Material 999 during July:

July 1 Beginning balance: 2,800 units @ $12.00 per unit
4 Issued 1,200 units
6 Received 1,000 units @ $13.30 per unit
8 Issued 1,000 units
14 Received 400 units @ $14.00 per unit
17 Issued 800 units
20 Received 500 units @ $14.16 per unit

Required: **Prepare a materials ledger card for Material 999, using (1) fifo costing, (2) lifo costing, and (3) average costing.**

SOLUTION

(1)

	Received			Issued		
Date	Units	Unit Cost	Cost	Units	Unit Cost	Cost
July 1						
4				1,200	$12.00	$14,400
6	1,000	$13.30	$13,300			
8				1,000	12.00	12,000
14	400	14.00	5,600			
17				600	12.00	7,200
				200	13.30	2,660
20	500	14.16	7,080			

Balance			
Units	Unit Cost		Amount
2,800	$12.00		$33,600
1,600	12.00		19,200
1,600	12.00	$ 19,200	
1,000	13.30	13,300	32,500
600	12.00	$ 7,200	
1,000	13.30	13,300	20,500
600	12.00	$ 7,200	
1,000	13.30	13,300	
400	14.00	5,600	26,100
800	13.30	$ 10,640	
400	14.00	5,600	16,240
800	13.30	$ 10,640	
400	14.00	5,600	
500	14.16	7,080	23,320

(2)

		Received			Issued	
Date	Units	Unit Cost	Cost	Units	Unit Cost	Cost
July 1						
4				1,200	$12.00	$14,400
6	1,000	$13.30	$13,300			
8				1,000	13.30	13,300
14	400	14.00	5,600			
17				400	14.00	5,600
				400	12.00	4,800
20	500	14.16	7,080			

Balance			
Units	Unit Cost		Amount
2,800	$12.00		$33,600
1,600	12.00		19,200
1,600	12.00	$ 19,200	
1,000	13.30	13,300	32,500
1,600	12.00		19,200
1,600	12.00	$ 19,200	
400	14.00	5,600	24,800
1,200	12.00		14,400
1,200	12.00	$ 14,400	
500	14.16	7,080	21,480

(3)

		Received			Issued	
Date	Units	Unit Cost	Cost	Units	Unit Cost	Cost
July 1						
4				1,200	$12.00	$14,400
6	1,000	$13.30	$13,300			
8				1,000	12.50	12,500
14	400	14.00	5,600			
17				800	12.80	10,240
20	500	14.16	7,080			

Balance		
Units	Unit Cost	Amount
2,800	$12.00	$33,600
1,600	12.00	19,200
2,600	12.50	32,500
1,600	12.50	20,000
2,000	12.80	25,600
1,200	12.80	15,360
1,700	13.20	22,440