

Retail Management

Thirteenth Edition
A Strategic Approach

CHAPTER 16: Financial Merchandise Management

Retail Mathematics Problems

Here are extra math problems on financial merchandising. Answers appear at the end of this file.

1. A retailer uses a perpetual inventory system. Compute the firm's end-of-month inventory at cost, if monthly sales (at cost) = \$500,000; monthly sales (at retail) = \$750,000; monthly purchases (at cost) = \$250,000; and beginning inventory (at cost) = \$600,000.

- a. \$ 75,000
- b. \$250,000
- c. \$350,000
- d. \$400,000

2. Compute the cost of goods sold, if sales = \$1,000,000; beginning inventory (at cost) = \$600,000; ending inventory (at cost) = \$150,000; purchases (at cost) = \$200,000.

- a. \$ 50,000
- b. \$250,000
- c. \$450,000
- d. \$650,000

3. What is the gross profit of the retailer in problem 2?

- a. -\$150,000
- b. \$ 50,000
- c. \$200,000
- d. \$350,000

4. If the operating expenses of the firm in problem 1 are \$50,000, what is its net profit or loss before taxes?

- a. 0
- b. \$50,000
- c. \$225,000
- d. \$300,000

5. What is the cost complement for Adams Stationery?

Calculation of Merchandise Available for Sale:

Cost Method -- Beginning inventory = \$75,000; Net purchases = \$50,000; Freight-in = \$1,500; Total merchandise available for sale = \$126,500

Retail Method -- Beginning inventory = \$200,000; Net purchases = \$55,000; Additional markups = \$10,000; Total merchandise available for sale = \$265,000

- a. 0.375
- b. 0.477
- c. 0.490
- d. 0.509

6. If Adams Stationery has sales, markdowns, and employee discounts that total \$100,000 during the time period noted in problem 5, what is the ending retail book value of inventory?

- a. \$153,500
- b. \$165,000
- c. \$195,000
- d. \$265,000

7. A physical inventory of the merchandise of Adams Stationery as of December 31, 2005 showed a valuation of \$160,000 (at retail). Compute the stock shortages that occurred during the period from January 1, 2005 to December 31, 2005.

- a. \$2,500
- b. \$5,000
- c. \$100,000
- d. \$105,000

8. Calculate the closing inventory at cost for Adams Stationery as of December 31, 2005.

- a. \$45,600
- b. \$76,320
- c. \$83,200
- d. \$93,200

9. A toy store has average monthly sales of \$80,000. Its sales for December were \$100,000. What is the monthly sales index for December?	a. 100
	b. 125
	c. 225
	d. 400

10. If the October monthly sales index is 200 for the company mentioned in problem 9, what are October's sales?	a. \$160,000
	b. \$200,000
	c. \$240,000
	d. \$300,000

11. A firm plans its average monthly stock at retail to be \$34,000 and its average monthly sales to be \$20,000. What is its basic stock at retail?	a. \$4,000
	b. \$14,000
	c. \$24,000
	d. \$34,000

12. For the firm noted in problem 11, its August sales are planned to be 50 percent greater than average monthly sales. If the store uses the percent variation method of inventory level planning, what should the August inventory level be?	a. \$30,000
	b. \$37,500
	c. \$40,500
	d. \$42,500

13. A camera retailer uses the weeks' supply method of inventory planning. If average weekly sales are \$4,000, and a three-week supply of merchandise is desired, what is the planned inventory level?	a. \$4,000
	b. \$8,000
	c. \$10,000
	d. \$12,000

14. A small appliance dealer estimates May sales to be \$300,000 and plans reductions to be 20 percent of sales and ending inventory to be \$65,000. Beginning inventory is \$85,000. Compute planned purchases at retail for May?	a. \$240,000
	b. \$340,000
	c. \$440,000
	d. \$580,000

15. If the appliance dealer in problem 14 receives \$60,000 in merchandise by May 10, what is the open-to-buy for the balance of the month?	a. \$180,000
	b. \$280,000
	c. \$320,000
	d. \$360,000

16. The small appliance dealer noted in problems 14 and 15 plans merchandise costs to be 80 percent of selling price. What is the open-to-buy at cost as of May 10?	a. \$144,000
	b. \$208,000
	c. \$212,500
	d. \$224,000

17. A health food retailer has \$100,000 in monthly operating expenses and planned monthly sales of \$400,000. Reductions are planned to be \$8,000. A profit goal of \$40,000 is established. What is the required initial markup?	a. 36.3%
	b. 39.3%
	c. 41.3%
	d. 43.3%

18. A mail-order retailer has an average inventory at retail of \$300,000 and net annual sales of \$4,000,000. What is the annual rate of stock turnover rate at retail?	a. 13.3x
	b. 16.3x
	c. 18.9x
	d. 27.7x

19. A clothing store has a gross margin of \$25,000 and net sales of \$100,000. What is the gross margin percentage?	a. 15%
	b. 20%
	c. 25%
	d. 80%

20. A computer retailer has net annual sales of \$150,000 and average inventory at cost is \$20,000. What is the annual sales-to-stock measure?	a. 5.0 x
	b. 6.0 x
	c. 7.0 x
	d. 7.5 x

21. If the retailer in problem 20 has a gross margin percentage of 15, what is the gross margin return on investment (GMROI)?	a. 95.0
	b. 112.5
	c. 210.5
	d. 240.0
22. A plant shop sells 20 plants a day and needs 5 days to order, receive, and display merchandise. What is the reorder point?	a. 17
	b. 50
	c. 77
	d. 100
23. If the plant shop in problem 22 desires a 7-plant safety stock, what should the reorder point be?	a. 7
	b. 27
	c. 107
	d. 177
24. A retailer estimates annual sales to be 1,000 units. The average unit costs \$50; annual carrying costs equal 10 percent of the cost of each unit; and order costs are \$20 per order. What is the economic order quantity?	a. 79
	b. 89
	c. 122
	d. 145
25. The retailer in question 24 now estimates annual sales to be 1,200 units. The numbers for average item costs; insurance and other carrying expenses, and order costs are unchanged from those in question 24. What is the economic order quantity?	a. 98
	b. 108
	c. 132
	d. 153

ANSWERS:

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|------|-------|-------|-------|-------|
| 1. c | 6. b | 11. b | 16. d | 21. b |
| 2. d | 7. b | 12. d | 17. a | 22. d |
| 3. d | 8. b | 13. d | 18. a | 23. c |
| 4. d | 9. b | 14. b | 19. c | 24. b |
| 5. b | 10. a | 15. b | 20. d | 25. a |