

Figure 16-13 ■ System Flowchart—Payroll Transactions

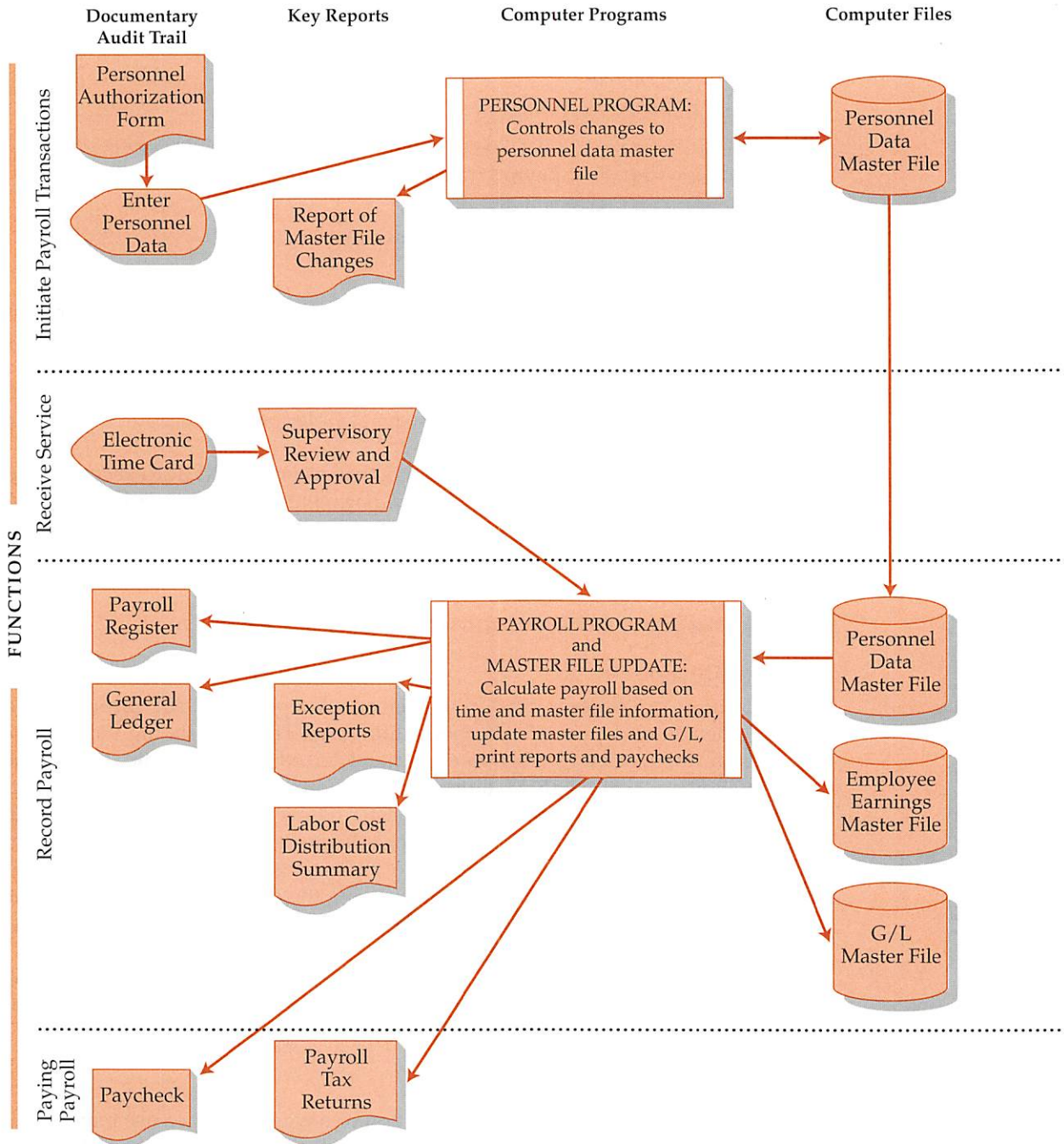


Figure 16-14 ■ Control Risk Considerations—Payroll Transactions

Function	Potential Misstatement	Computer Control ^a (Manual Controls in Italics)	E01	C1	VA1	PD1
Initiating Payroll Transactions						
Hiring employees	Fictitious employees may be added to the payroll.	<i>Personnel department authorizes all new hires.</i>	P	P		
		<i>Only a few key employees in personnel can add a new employee to the master payroll file.</i>	P	P		
		Computer reports all changes to the personnel data master file. <i>Management in personnel reviews report of all master file changes.</i>	D	D		
Authorizing payroll changes	Employees may receive unauthorized rate increases.	<i>Personnel department authorizes all rate changes to the personnel data master file.</i>			P	
	Terminated employees may remain on the payroll.	<i>Personnel department removes terminated employees from the personnel data master file.</i>	P			
		<i>Only a few key employees in personnel can change information on the personnel data master file</i>	D	D		
		<i>Management in personnel department reviews all changes to the personnel data master file.</i>	D	D	D	D
Receipt of Services						
Preparing attendance and time-keeping data	Employees may be paid for hours not worked.	<i>Use of time clock procedures and supervisory approval of time tickets.</i>	P	P		
	Employees may not be paid for hours worked.					
Recording Payroll Transactions						
Preparing and recording the payroll	Payroll data may be lost during submission to IT.	Batch total of hours worked prepared by payroll department and verified by the computer.	D	D	D	D
	Payroll transactions may include incorrectly keyed or invalid data.	Computer limit test on the number of hours worked and the amount of each payroll check.	D	D	D	D
		Data submitted for processing is compared with the master payroll file.	D		D	D
Paying Payroll						
Paying the payroll and protecting unclaimed wages	Payroll check may be distributed to unauthorized recipients.	<i>Employee identification needed to receive payroll check.</i>	D	D	D	D
Filing payroll tax returns	Payroll tax returns may not be filed on a timely basis.	<i>Assignment of responsibility for timely filing of returns.</i>		P	P	
		<i>Review of timely filing of return by accounting management.</i>		D	D	
Management Control						
	Payroll may be recorded for services not received; they may be posted to the wrong account or in the wrong amount.	An appropriate level of management reviews all purchases charged to their responsibility center on a timely basis reviewing employees, amounts, and accounts charged.	D	D	D	D

^a All computer controls assume that exceptions are either printed on an exception report for followup or an error message appears during input and the transaction cannot be processed without correction and acceptance.

P = potential control to prevent misstatement or unauthorized use of resources.

D = potential control to detect misstatement or unauthorized use of resources.

The personnel department should also issue a termination notice on completion of an individual's employment. Prompt updating of the personnel data master file is vital in preventing terminated employees from continuing on the payroll. Thus, this control relates to existence or occurrence assertions.

Receiving Services

Preparing Attendance and Timekeeping Data

In many companies, a timekeeping department is responsible for this function. Time clocks are frequently used to record time worked by an employee when a clock card or employee badge is inserted in the clock. To prevent one employee from "punching in" for another employee, security personnel should supervise the clock card procedures.

For factory employees, clock card hours must be supported by time tickets showing the type of work done (direct or indirect labor) and the jobs to which direct labor hours are to be charged. All time worked should be approved in writing by a supervisor. Timekeeping then reconciles the approved time tickets and clock cards and forwards them to payroll for use in preparing the payroll.

By ensuring that accurate data are accumulated on time worked, controls over the timekeeping function relate to the existence or occurrence, completeness, and valuation or allocation assertions for payroll transactions. Supervisory approval of the labor classification relates to the presentation and disclosure assertion. The timekeeping function is not shown in Figure 16-13.

Recording and Paying Payroll

Preparing the Payroll

Figure 16-14 illustrates typical controls in a basic system for preparing the payroll. Information from electronic time cards should be forwarded to the supervisor for review and electronic approval. The file is then electronically forwarded to payroll for processing. In some systems, a batch total can be prepared that will compare the total number of transactions submitted for processing with the number of individual electronic time cards to test the accuracy of the data submitted for processing.

The payroll program sorts payroll transactions by employee number, and the data are subjected to an edit check routine. This includes a check for valid employee number and a limit or reasonableness check on the hours worked. The output of this run consists of valid payroll transactions and an exceptions and control report that is sent to data control. Data control compares the control totals with the batch control log, informs the payroll department of exceptions discovered by the edit routine, and follows up to see that payroll submits corrected data. These controls over the data entry process preceding the calculation of the payroll contribute to the existence or occurrence, completeness, and valuation or allocation assertions for payroll transactions.

In the system shown in Figure 16-13, the program uses data from the valid payroll transactions, and the personnel data and employee earnings master files, to calculate payroll and prepare the payroll register and payroll checks. This program also records the payroll as described in the next section.

Figure 16-15 ■ Preliminary Audit Strategies for the Personnel Services Cycle

Assertion	Inherent Risk	Control Risk	Analytical Procedures Risk	Test of Details Risk
Existence and Occurrence	High: There are important inherent risks associated with fictitious employees being put on the payroll, overreporting of hours worked, and (in some instances) overreporting payroll costs on cost plus contracts.	Low: A strong system of internal control, including controls over the payroll master file, should minimize the risk of fictitious employees or unauthorized hours in routine payroll transactions.	Moderate: Analytical procedures may provide a reasonableness test for overstatements if there are good controls over information regarding number of employees and hours worked.	High: The auditor might perform moderately extensive test transactions at an interim date regarding the existence of and update tests of controls at final. The auditor will refer to the results of an ERISA audit with respect to pension balances.
Completeness	Moderate: If employees are not paid, they are likely to complain, minimizing the risk of unrecorded payroll. There may be some inherent risk of unrecorded payroll taxes and other benefits.	Low: A strong system of internal control, including controls over the payroll master file, should minimize the risk of completeness problems with routine payroll transactions.	Moderate: Analytical procedures may provide a reasonableness test for understatements if there are good controls over information regarding number of employees and hours worked.	Very High: The auditor may perform some tests of transactions to ensure that all payroll transactions are recorded.
Rights and Obligations	Moderate: It is unusual for entities to record obligations that they do not owe.	Low: A strong system of internal control should ensure that payroll liabilities are the obligations of the entity.	Maximum: Analytical procedures are not directed at the rights and obligations assertion.	High: The auditor will perform test of balances at an interim date to ensure that the obligations are the obligations of the entity.
Valuation or Allocation	Moderate: Payroll calculations are not complex.	Low: A strong system of internal control, including controls over the payroll master file, should minimize the risk of valuation problems with routine payroll transactions.	Moderate to High: Analytical procedures may provide a reasonableness test about the valuation of problems regarding gross payroll.	Low to High: The extensiveness of tests transactions at an interim date depends on controls and the results of analytical procedures. The auditor will refer to the results of an ERISA audit with respect to pension balances and recalculate stock option information.
Presentation and Disclosure	High: There are significant disclosures associated with stock options and employee benefits plans.	Moderate or Maximum: Primary control is the involvement of an effective disclosure committee.	Maximum: Analytical procedures are not directed at disclosures.	Very Low: The auditor will often perform tests of details to evaluate the quality and accuracy of financial statement disclosures.

Audit Decision 10

■ How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for payroll balances?

SUBSTANTIVE TESTS OF THE PERSONNEL SERVICES CYCLE

Substantive tests of payroll transactions are often performed at an interim date as part of a dual purpose test. Substantive tests of payroll balances are normally performed at or near the balance sheet date. The balances include accrued liabilities for salaries, wages, commission, bonuses, employee benefits, and payroll taxes, and the related expense accounts. The imprest payroll account balance is considered in Chapter 18. Possible substantive tests of the personnel services cycle and the specific account balance audit objectives to which they relate are shown in Figure 16-16. Each of the substantive tests is discussed in a following section, together with selected comments about how the tests can be tailored based on the acceptable level of detection risk to be achieved.

Initial Procedures

An essential initial procedure involves obtaining an understanding of the entity's business and industry, and expected payroll costs. This allows the auditor to develop a knowledgeable perspective about the entity and to set the context for evaluating analytical procedures and tests of details. If the client is a manufacturer, it is particularly important to understand the mix payroll costs versus other manufacturing costs and how this interacts with the production cycle. It is also important to understand incentive compensation agreements and the degree to which these agreements might influence behavior relating to other cycles (e.g., compensating executive only on the level of revenues). Finally, the auditor also needs to understand the nature of pension agreements, stock options, and other employee benefit costs.

In tracing beginning payroll and payroll tax payable balances to prior-year working papers, the auditor should make certain that any audit adjustments agreed upon in the prior year did in fact get recorded. In addition, current-period entries in the general ledger inventory accounts should be scanned to identify any postings that are unusual in amount or nature and require special investigation. Initial procedures also involve determining that the detailed subsidiary ledgers for payroll liabilities tie in with the general ledger balances.

Analytical Procedures

The importance of analytical procedures was discussed earlier in the chapter. The auditor's goal is to develop an expectation of accrued payroll account balances and the relationship between payroll costs and hours worked. Several analytical procedures that can be performed to provide evidence about payroll accruals are shown in Figure 16-12. The auditor should be alert to signals of unrecorded payroll liabilities. Analytical procedures are performed in the final stages of the engagement to ensure that the evidence evaluated in details tests is consistent with the overall picture reported in the financial statements.

Tests of Details of Transactions

These tests involve the procedures of vouching and tracing to obtain evidence about the processing of individual personnel services transactions. Special con-

Figure 16-16 ■ Possible Substantive Tests of Personnel Services Assertions

Category	Substantive Test	Specific Audit Objectives
Initial Procedures	1. Obtain an understanding of the business and industry and determine: <ol style="list-style-type: none"> The significance of payroll costs to the business Key economic drivers that influence payroll costs The extent to which the client has defined benefit pension plans or uses other incentive compensation plans. 	All
	2. Perform initial procedures on inventory balances and records that will be subjected to further testing. <ol style="list-style-type: none"> Trace beginning accrued payroll balances to prior year's working papers. Review activity in payroll accounts and investigate entries that appear unusual in amount or source. Verify totals of payroll registers and other subsidiary ledgers for agreement with general ledger balances. 	VA3 EO3, VA3, PD3 VA3
	3. Perform analytical procedures: <ol style="list-style-type: none"> Review industry experience and trends. Examine analysis of payroll costs. Review relationship of payroll costs to recent production and sales activities. 	All
Tests of Details of Transactions	4. On a test basis, vouch payroll transactions to supporting documentation. (e.g., time cards, employee contracts, bonus arrangements, and incentive compensation agreements).	EO1, EO2, VA1, V2, PD1, PD2
	5. On a test basis, vouch payroll tax transactions to supporting documentation (e.g., underlying gross payroll and calculation of payroll taxes).	EO1, EO2, VA1, V2, PD1, PD2
	6. Verify officer compensation to board of director authorization.	EO1, EO2, VA1, V2, PD1, PD2 C1, C2
	7. On a test basis, trace data from time cards and contracts to the payroll register.	EO1, EO2, C1, C2
Tests of Details of Balances	8. Test payroll cutoff at the end of the month (year) based on time periods worked and payroll accrual if month (year) end and the end of the payroll period do not match up.	EO1, EO2, C1, C2
	9. Recalculate accrued payroll liabilities at year-end to underlying payroll records.	EO2, C2, VA2, PD2
	10. Recalculate accrued payroll tax liabilities and vouch to subsequent cash disbursements.	EO2, C2, VA2, PD2
Tests of Details of Balances: Accounting Estimates	11. Determine that accrued payroll payables are the obligations of the entity.	RO1
	12. Determine method of accounting for stock options, and recalculate stock option expense (or disclosure information).	EO1, EO2, VA1, V2, PD1, PD2
Presentation and Disclosure	13. Compare statement presentation with GAAP. <ol style="list-style-type: none"> Compare pension plan disclosures to results of ERISA audit. Review presentation and disclosure for payroll costs (pensions, stock options, and other compensation arrangements) in drafts of the financial statements and determine conformity with GAAP. Evaluate the completeness of presentation and disclosures for personnel services activities in drafts of financial statements to determine conformity to GAAP by reference to disclosure checklist. Read disclosures and independently evaluate their classification and understandability. 	PD3, PD6 PD3, PD6 PD4 PD5

sideration is given to payroll taxes, benefits and pension costs, incentive compensation agreements, and determining the propriety of the cutoff of payroll transactions at the end of the accounting period.

Test Entries to Payroll Accounts

Some or all of this type of testing may be done as part of dual-purpose tests during interim work. Examples of vouching recorded entries in payroll accounts include the vouching of

- Debits in the payroll register, including the appropriateness of classification of payroll costs charged to various manufacturing activities.
- The determination of the costs associated with various incentive compensation agreements.
- The determination of pension costs, including the use of an actuary to determine the costs for defined benefit pension plans.
- The determination of the expense associated with stock options using an options pricing model (which might be recorded as an expense or disclosed in the notes to the financial statements).
- The determination of authorization of officers' compensation by the board of directors.

Recall that vouching entries in the payroll register provides evidence about the existence and occurrence and valuation of payroll at the time of the transaction. Tracing documentation for payroll transactions provides evidence for the completeness and valuation of personnel services assertions.

Officers' compensation is audit sensitive for the following two reasons: (1) separate disclosure of officers' compensation is required in 10-K reports that public companies file with the SEC, and (2) officers may be able to override controls and receive salaries, bonuses, stock options, and other forms of compensation in excess of authorized amounts. For these reasons, board of directors' authorizations for officers' salaries and other forms of compensation should be compared with recorded amounts. This test pertains to objectives related to each category of assertions.

Test Cutoff of Personnel Service Transactions

Depending on how pay periods are determined, there may be a risk of misstatement associated with cutoff problems. If employees are paid every two weeks and payroll is recorded when paid, it is possible that almost two weeks worth of payroll costs have not been recorded at month, quarter, or year-end. The auditor should determine management's procedures for accruing personnel services costs, including the costs of gross payroll, payroll taxes, and other benefits and test the completeness and accuracy of payroll accruals.

Test of Details of Balances and Disclosures

Tests of details of balances focus on the following procedures:

- Recalculating accruals
- Auditing employee benefits and pension plans
- Auditing stock options and stock appreciation rights

Recalculate Accrued Payroll Liabilities

It is necessary for many companies to make a variety of accruals at the balance sheet date for amounts owed to officers and employees for salaries and wages, commissions, bonuses, vacation pay, and so on, and for amounts owed to government agencies for payroll taxes. Although the auditor's primary concern for payroll expenses for the year is with overstatement, for the year-end accruals the primary concern is with understatement. Also of concern is consistency in the methods of calculating the accruals from period to period.

In obtaining evidence concerning the reasonableness of management's accruals, the auditor should review management's calculations or make independent calculations. Accruals for payroll taxes should be compared with amounts shown on payroll tax returns. Additional evidence can be obtained by examining subsequent payments made on the accruals prior to the completion of fieldwork. Evidence obtained from these tests pertains primarily to objectives related to the valuation or allocation assertion.

Auditing Employee Benefits and Pension Plans

Many companies offer significant pension and postretirement benefits to employees. A number of manufacturing companies have defined benefit pension plans that present significant issues with respect to the measurement of pension expenses, as well as pension disclosures. The most significant risks are associated with misstatements in the valuation or allocation assertion (determining pension expenses), and the presentation and disclosure assertions (disclosure in the pension footnote). Defined benefit pension plans are normally subject to requirements of the Employee Retirement Income Security Act (ERISA) of 1974, which usually requires a separate audit of the pension plan. The financial statement auditor can usually refer to the results of the ERISA audit when auditing pension expenses and disclosures. When completing the ERISA audit, the auditor will usually employ an outside expert to audit the important actuarial assumptions that are needed to determine pension expenses and the projected benefit obligation. When auditing pension expenses, the auditor should also evaluate the reasonableness of the key actuarial estimates such as the discount rate that is used to determine the projected benefit obligation and the long-term rate of return assumption used for the expected return on plan assets. The discount rate should be in line with current annuity purchase rates or high-quality fixed income investments. The long-term rate of return assumption should reflect the actual and anticipated returns for the plan's assets.

Auditing Stock Options and Stock Appreciation Rights

A common form of employee compensation for many companies involves the use of stock options. The auditor should determine (1) the types of incentive compensation plans used to compensate employees and officers, (2) how compensation expense is determined, and how compensation expense is allocated to various accounting periods, and (3) the adequacy of disclosure related to incentive compensation plans.

First, the auditor should determine the incentive compensation methods used by the client and read the underlying contracts to identify significant terms associated with incentive compensation plans. Common methods include the use of both incentive stock options and, in some cases, stock appreciation rights. Stock appreciation rights are often used for key employees to provide them with sufficient cash

to exercise stock options and hold the stock, rather than selling the stock to obtain sufficient cash to exercise the option.

With respect to accounting for compensation expense, most companies structure their stock option plans to meet the requirements of APB No. 25, so that they may use the intrinsic value approach and report no compensation expense associated with the use of stock options. Stock appreciation rights, however, require the recognition of compensation expense, regardless of whether the right is exercised during the period. The auditor needs to carefully evaluate the appropriateness of the application of GAAP in the context of the terms of contracts associated with stock options and stock appreciation rights.

The most significant issue associated with incentive compensation plans relates to adequate disclosures in the financial statements. FASB No. 123 requires these companies to disclose pro forma net income and earnings per share as if the fair value approach were used. As a result, the auditor must audit the valuation model used to determine the fair value of the stock options. When evaluating fair presentation in the financial statements, the auditor evaluates assumptions that include the risk-free rate, the expected life of the option, the expected volatility of the stock price, and expected dividends.

The auditor should also evaluate the fair presentation of disclosures, including general descriptions of the plan, and the number and weighted-average exercise prices of options that were outstanding at the beginning and end of the year, as well as options granted, exercised, forfeited, or expired during the year.

[LEARNING CHECK]

- 16-22** a. What is the likely acceptable level of detection risk for payroll expense account assertions? Why?
 b. What effect does this have on the design of substantive tests for payroll assertions?
- 16-23** a. What procedures should be performed to obtain evidence about the reasonableness of management's accrued payroll liabilities?
 b. Why is officers' compensation audit sensitive, and what tests should be performed on such compensation?
 c. Explain how the auditor should test the appropriateness of accrued pension costs and pension expenses.
 d. Explain how the auditor should test the appropriateness of stock compensation expense.

[OTHER SERVICES IN THE PRODUCTION AND PERSONNEL SERVICES CYCLES]

Inventory management is a core process that every manufacturing, wholesaling, and retailing company must manage well in order to attain profitability and cash flow goals. When the auditor evaluates issues such as the net realizable value of inventory, he or she should consider the client's business risks and the risk of substitute products or competitors taking market share. This knowledge might lead to a risk assessment assurance service.

Audit Decision 11

■ How does the auditor use the knowledge obtained during the audit of the production and personnel services cycles to support other assurance services?

Furthermore, the auditor's analytical procedures will address the effectiveness of the inventory management process. Usually, the auditor will evaluate an entity's inventory turn days. Figure 16-3 points out the wide variation in inventory turn days for three different industries. If a client ranks near the bottom of the industry, the CPA will usually try to address the issue of how the client could improve the inventory management process. CPAs regularly make recommendations for improvements in information systems that allow management to better monitor and control inventory shrinkage and better match inventory quantities with demand. However, the CPA must take care to focus on recommendations for the client and not cross the line of making management decisions or engaging in implementation issues that would impair the auditor's independence.

Personnel management is a core process for many companies. Today, most of the employment in the United States is in the service sector rather than in manufacturing. Many companies in the service sector track revenue per employee. Retailers often track both revenue per square foot and revenue per employee. When performing the audit, many CPAs monitor this statistic and evaluate performance relative to others in the industry. CPAs who understand the industry can often help clients identify opportunities that may exist in growing revenue per employee.

When auditing expenses and profitability, a CPA will often evaluate employee productivity statistics. As employees are more productive, companies will often obtain better profitability in an industry. Having a means to evaluate employee productivity (often the productivity of employee teams or departments) is particularly important in service organizations. CPAs are often skilled at developing the means to hold responsibility centers accountable for their use of resources—in this case the payroll resource. CPAs may assist clients by (1) suggesting appropriate measures of employee productivity or by (2) identifying steps that a client may take to improve employee productivity. For example, a manufacturing company may monitor the number of units produced per employee (excluding defects and rework). A service organization, such as a software company, may evaluate the number of new product innovations that are adopted by the marketplace that come from a product development team. A university may monitor outcomes such as the amount of grants and contracts obtained by a department's faculty member or a department's student-faculty ratios, student retention rates, and graduation rates. CPAs may work with clients to develop an appropriate set of performance measures as part of a performance measurement assurance service.

[FOCUS ON AUDIT DECISIONS]

This chapter focuses on the practical aspects of auditing the production and personnel services cycles. The chapter pays particular attention to audit planning concerns related to the production and personnel services cycles, specific internal controls that are tailored to these cycles, and substantive tests for each cycle. Figure 16-17 summarizes the audit decisions discussed in Chapter 16 and provides page references indicating where these decisions are discussed in more detail.

Figure 16-17 ■ Summary of Audit Decisions Discussed in Chapter 16

Audit Decision	Factors That Influence the Audit Decision	Chapter References
D1. What is the nature of the production cycle, and how are specific audit objectives developed for the production cycle?	The production cycle focuses on the audit of inventory for a manufacturer. It includes the purchases of raw materials, payment for direct and indirect labor, and the process of determining total production costs, the cost of ending inventory and of cost of goods sold. Figure 16-2 uses the framework developed in Chapter 6 to determine the specific audit objectives for the purchases cycle.	pp. 744–745
D2. What audit planning decisions should be made when developing an audit program for the production cycle?	<p>Figure 16-3 illustrates how the auditor would use knowledge of the entity and its environment in the context of five example industries, each with different characteristics and risks. This knowledge is used to (1) develop expectations of the financial statements and (2) assess the risk of material misstatement.</p> <p>Figure 16-4 presents a number of analytical procedures that are commonly used when auditing inventory and the production cycle, along with a discussion of their audit significance.</p> <p>Many assertions in the production cycle involve important inherent risks. Some key risks are identified below and discussed in more detail in the chapters. Does the inventory actually exist (E&O)? Significant financial frauds have stemmed from phantom inventory. Is all inventory counted (C)? Does the client hold consignment inventory or have inventory on consignment out (RO)? There are significant valuation issues associated with accounting for production costs (VA). Additional inherent risk factors are discussed in the chapter.</p>	pp. 745–749
D3. What should be considered in evaluating control activities for the production cycle transactions?	The primary functions in the production cycle include initiating production, producing inventory, and recording inventory. Figure 16-5 provides an overview of the accounting system for the production cycle, and Figure 16-6 identifies a number of example control activities that can control the financial reporting process for this cycle.	pp. 749–756
D4. What factors are involved in determining an acceptable level of tests of details risk for inventory assertions?	Figure 16-7 explains one possible preliminary audit strategy for each assertion in the production cycle for the audit of inventory. This figure provides a summary of how inherent risk, control risk, and detection risk may influence test of details risk for inventory.	p. 757
D5. How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for inventory?	This section of the chapter uses the framework developed in Chapter 12 to develop substantive tests for each specific audit objective in the production cycle. These are summarized in Figure 16-8 and explained in depth in the chapter discussion. Particular focus is given to tests of the existence of inventory.	pp. 757–769
D6. What is the nature of the personnel services cycle, and how are specific audit objectives developed for the personnel services cycle?	The personnel services cycle includes executive compensation, employee compensation, salaried wages, hourly wages, incentive compensation plans, bonuses, stock options, and other benefits. Figure 16-11 uses the framework developed in Chapter 6 to determine the specific audit objectives for the personnel services cycle.	pp. 769–770

(continues)

Figure 16-17 ■ (Continued)

Audit Decision	Factors That Influence the Audit Decision	Chapter References
D7. What audit planning decisions should be made when developing an audit program for the personnel services cycle?	<p>Various industries vary significantly in their labor intensiveness. The personnel services cycle is particularly important in the service sector that dominates the United States economy. The chapter discussion focuses on how this knowledge is used to (1) develop expectations of the financial statements and (2) assess the risk of material misstatement.</p> <p>Figure 16-12 presents a number of analytical procedures that are commonly used when auditing the personnel services cycle, along with a discussion of the significance of each ratio.</p> <p>There are a number of important inherent risks in the personnel services cycle. Risks include fictitious employees on the payroll, the overstatement of hours worked, cutoff problems if the pay period does not coincide with month or year-end, and valuation issues associated with stock options and accounting for pension plans. In addition, the auditor needs to be alert to padding of labor costs in cost plus contracts.</p>	pp. 770–773
D8. What should be considered in evaluating control activities for personnel services cycle transactions?	<p>Most personnel service transactions are routine transactions where risks can be controlled by an effective system of internal control. The key functions in the payroll cycle include initiating payroll transactions, the receipt of services, and recording and paying payroll transactions. Figure 16-13 provides an overview of the personnel services cycle, and Figure 16-14 explains control activities commonly found in the personnel services cycle. The chapter discussion addresses the common functions, documents, and controls found in many companies.</p>	pp. 773–779
D9. What factors are involved in determining an acceptable level of tests of details risk for payroll balance assertions?	<p>Figure 16-15 explains the details behind a preliminary audit strategy for each assertion in the personnel services cycle. This figure provides a summary of how inherent risk, control risk, and detection risk may influence test of details risk for payroll balances.</p>	pp. 780–781
D10. How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for payroll balances?	<p>This section of the chapter uses the framework developed in Chapter 12 to develop substantive tests for each specific audit objective in the personnel services cycle. Figure 16-16 provides an example of substantive tests normally performed in the personnel services cycle. These examples are explained in more depth in the chapter.</p>	pp. 782–786
D11. How does the auditor use the knowledge obtained during the audit of the production and personnel services cycles to support other assurance services?	<p>Once the auditor has completed an audit of the production and personnel services cycles, the auditor should have information that supports an audit opinion, recommendations about improvements in internal controls, and knowledge that may be relevant to other client services. This final section of the chapter provides examples of how knowledge obtained while auditing the expenditure cycle can be used to support other assurance services that clients value.</p>	pp. 786–787

objective questions

Objective questions are available for the student at www.wiley.com/college/boynton

comprehensive questions

- 16-24 **(Analytical procedures)** Circuits Technology, Inc. (CTI) resells, installs and provides computer networking products (client software, gateway hardware and software, and twinax hardware) to other businesses. Exhibit 16-24 provides some summary information from CTI's financial statements.

EXHIBIT 16-24 CTI SELECTED FINANCIAL INFORMATION (\$000)

	20x1	20x2	20x3	20x4	20x5
Accounts Receivable, net	\$ 837	\$ 1,335	\$ 1,121	\$ 962	\$ 822
Inventory	\$ 1,025	\$ 1,327	\$ 1,099	\$ 1,003	\$ 1,027
Accounts Payable	\$ 164	\$ 380	\$ 225	\$ 201	\$ 175
Sales	\$ 3,780	\$ 5,638	\$ 4,623	\$ 4,022	\$ 3,095
Cost of Sales	\$ 1,812	\$ 2,691	\$ 2,399	\$ 1,923	\$ 1,859
Gross Margin	\$ 1,968	\$ 2,947	\$ 2,224	\$ 2,099	\$ 2,046

Required

- Calculate purchases, gross margin, inventory turn days, accounts receivable turn days, and accounts payable turn days for the years ended 20x2, 20x3, 20x4, 20x5.
 - Describe the trends identified by performing analytical procedures in the gross operating cycle, the net operating cycle, and gross margin.
 - If tolerable misstatement is \$45,000 for inventory, develop an expectation range for inventory turn days.
 - With respect to inventory, what might these trends indicate about the potential misstatement in inventory?
- 16-25 **(Analytical procedures—production and personnel services cycles)** The following information was taken from the accounting records for Aurora Manufacturing, Inc. The market for Aurora's products has been very competitive in 20x4, and the company was able to raise prices only 3.7 percent.

	UNAUDITED 20x4	AUDITED 20x3	AUDITED 20x2
Sales	\$ 12,005,336	\$ 10,291,333	\$ 8,892,133
Cost of Raw Materials Used	\$ 3,923,336	\$ 3,173,333	\$ 2,800,000
Direct Labor Cost	\$ 1,696,081	\$ 1,364,314	\$ 1,190,000
Cost of Payroll Taxes and Benefits	\$ 580,060	\$ 439,309	\$ 383,180
Indirect Costs	\$ 1,088,885	\$ 1,094,930	\$ 962,100
	<u>\$ 7,288,362</u>	<u>\$ 6,071,886</u>	<u>\$ 5,335,280</u>
Beginning Inventory	\$ 330,587	\$ 274,764	\$ 156,577
Ending Inventory	\$ 470,016	\$ 330,587	\$ 274,764
Capacity	10,000,000	10,000,000	10,000,000
Units Produced	8,780,800	7,840,000	7,000,000
Units Sold	8,750,000	7,775,000	6,850,000

Beginning Inventory	415,000	350,000	200,000
Ending Inventory	445,800	415,000	350,000
Direct Labor Hours	92,429	76,863	70,000
Number of Manufacturing Employees	46	38	35
Labor Cost Including Benefits	\$ 2,276,140	\$ 1,803,623	\$ 1,573,180
Tons of Raw Material Used	7,473	6,222	5,600
Tons of Ending Raw Materials Inventory	21	18	16

Required

- a. Calculate the following ratios for years 2, 3, and 4:
 - Cost of goods sold
 - Gross profit percentage
 - Inventory turn days (ending inventory / cost of sales* 365)
 - Number of units per ton of raw materials
 - Number of units per direct labor hour
 - Cost of raw materials produced per ton
 - Cost of direct labor per hour
 - Payroll taxes and benefits as a percent of direct labor cost
 - Cost per unit of ending inventory
- b. Describe the trends in raw materials costs and direct labor costs. Are these results consistent with the trends in gross profit margin and inventory turnover? What are the implications of the resulting ratios for the auditor's audit strategy in year 4? What specific audit objectives are likely to be misstated? How should the auditor respond in terms of potential audit tests?

16-26 **(Evaluation of internal controls—raw materials and supplies inventory)** The Jameson Company produces a variety of chemical products for use by plastics manufacturers. The plant operates on two shifts, five days per week, with maintenance work performed on the third shift and on Saturdays as required.

An audit conducted by the staff of the new corporate internal audit department has recently been completed, and the comments on inventory control were not favorable. Audit comments were particularly directed to the control of raw material ingredients and maintenance materials.

Raw material ingredients are received at the back of the plant, signed for by one of the employees of the batching department, and stored near the location of the initial batching process. Receiving tallies are given to the supervisor during the day, and he forwards the tallies to the inventory control department at the end of the day. The inventory control department calculates ingredient use using weekly reports of actual production and standard formulas. Physical inventories are taken quarterly. Purchase requisitions are prepared by the inventory control department and rush orders are frequent. In spite of the need for rush orders, the production superintendent regularly gets memos from the controller stating that there must be excessive inventory because the ingredient inventory dollar value is too high.

Maintenance parts and supplies are received and stored in a storeroom. There is a storeroom clerk on each of the operating shifts. Storeroom requisitions are to be filled out for everything taken from the storeroom; however, this practice is not always followed. The storeroom is not locked when the clerk is out because of the need to obtain parts quickly. The storeroom is also open during the third shift for the maintenance crews to get parts as needed. Purchase requisitions are prepared by the storeroom clerk, and physical inventory is taken on a cycle count basis. Rush orders are frequent.

Required

- a. Identify the weaknesses in Jameson Company's internal control procedures used for (1) ingredients inventory and (2) maintenance material and supplies inventory.

b. Recommend improvements that should be instituted for each of these areas.

ICMA

16-27 **(Substantive tests and related assertions—inventory balances)** In performing substantive tests of inventory balances in the audit of the Henning Company, Karlene Kerr, CPA, recognizes that the following potential misstatements may occur or exist:

1. All inventory items are not counted or tagged.
2. Extension errors are made on the client's inventory summaries.
3. Purchases received near the balance sheet date may be included in the physical count but may not be booked.
4. Obsolete and damaged goods are not noticed in warehouse.
5. Inventory stored in a public warehouse may not exist.
6. Client personnel may incorrectly count the inventory.
7. The lower-of-cost-or-market method may be incorrectly applied.
8. Empty containers or hollow squares may be included in the inventory.
9. Goods held on consignment may be included as inventory.
10. Losses on purchase commitments may not be recognized.

Required

- a. Identify the substantive test that should detect each error.
- b. For each test, indicate the financial statement assertion(s) to which it pertains.
- c. Indicate the type of audit procedures (i.e., inspection of tangible assets, confirmations) used for each substantive test. (Use a tabular format for your answers with one column for each part.)

16-28 **(Audit procedures for cost/standard cost system)** The client's cost system is often the focal point in the CPA's audit of the financial statements of a manufacturing company.

Required

- a. For what purpose does the CPA review the cost system?
- b. The Summerfield Manufacturing Company employs standard costs in its cost accounting system. List the auditing procedures that you would apply to satisfy yourself that Summerfield's cost standards and related variance amounts are acceptable and have not distorted the financial statements. (Confine your auditing procedures to those applicable to materials.)

AICPA

16-29 **(Computer-assisted substantive tests for inventory)** An auditor is conducting an audit of the financial statements of a wholesale cosmetics distributor with an inventory consisting of thousands of individual items. The distributor keeps its inventory in its own distribution center and two public warehouses. An inventory computer file is maintained on a computer disk and at the end of each day the file is updated. Each record of the inventory file contains the following data:

1. Item number
2. Location of item
3. Description of item

4. Quantity on hand
5. Cost per item
6. Date of last purchase
7. Date of last sale
8. Quantity sold during year

The auditor is planning to observe the distributor's physical count of inventories as of a given date. The auditor will have available a computer tape of the data on the inventory file on the date of the physical count and a general-purpose computer software package.

Required

The auditor is planning to perform inventory substantive tests. Identify the inventory tests and describe how use of the general-purpose software package and the tape of the inventory file data might be helpful to the auditor in performing such tests. (*Hint:* You may wish to refer to Chapter 12 as well as this chapter in answering this question.) Organize your answer as follows:

INVENTORY SUBSTANTIVE TEST	HOW GENERALIZED AUDIT SOFTWARE MIGHT BE HELPFUL FOR SUBSTANTIVE TESTS
1. Observe the physical count, making and recording test counts when applicable.	1. Determine which items are to be test counted by selecting a random sample of a representative number of items from the inventory file as of the date of the physical count.

AICPA

16-30 (Computer-assisted substantive tests for inventory) Brown, CPA, is auditing the financial statements of Big Z Wholesaling, Inc., a continuing audit client, for the year ended January 31, 20X2. On January 5, 20X2, Brown observed the tagging and counting of Big Z's physical inventory and made appropriate test counts. These test counts have been recorded on a computer file. As in prior years, Big Z gave Brown two computer files. One file represents the perpetual inventory (FIFO) records for the year ended January 31, 20X2. The other file represents the January 5 physical inventory count. Assume:

- Brown issued an unqualified opinion on the prior year's financial statements.
- All inventory is purchased for resale and located in a single warehouse.
- Brown has appropriate computerized audit software.
- The perpetual inventory file contains the following information in item number sequence:
 - Beginning balances at February 1, 20X1: Item number, item description, total quantity, and prices.
 - For each item purchased during the year: Date received, receiving report number, vendor, item number, item description, quantity, and total dollar amount.
 - For each item sold during the year: Date shipped, invoice number, item number, item description, quantity shipped, and dollar amount of the cost removed from inventory.
 - For each item adjusted for physical inventory count differences: date, item number, item description, quantity, and dollar amount.
- The physical inventory file contains the following information in item number sequence: tag number, item number, item description, and count quantity.

Required

Describe the substantive auditing procedures Brown may consider performing with computerized audit software using Big Z's two computer files and Brown's computer file of test counts. The substantive auditing procedures described may indicate the reports to be printed out for Brown's followup by subsequent application of manual procedures. Do not describe subsequent manual auditing procedures.

Group the procedures by those using (a) the perpetual inventory file and (b) the physical inventory and test count files. (*Hint:* You may wish to refer to Chapter 12 as well as this chapter in answering this question.)

AICPA

- 16-31 **(PPS statistical sampling for inventory balance)** In auditing the December 31, 20X1, physical inventory being taken by employees in the Sutter Company, you decide to use PPS sampling for variables to determine that the inventory is not materially misstated. Thus far, the following information has been compiled:

Book value of inventory	\$2,960,000
Tolerable misstatement	\$200,000
Population size	6,511
Estimated standard deviation	\$100
Desired risk of incorrect acceptance	5%
Anticipated misstatement	\$50,000

Required

- Calculate sample size and the sampling interval.
- Assume that three items in the sample contained errors as follows:

Part Number	Book Value	Audit Value
40965	\$15,700	\$12,560
41139	\$56,000	\$50,400
47622	\$23,200	\$22,040

Calculate the projected error and the allowance for sampling risk.

- What conclusion is supported by the sample results? Explain.
- 16-32 **(Internal control questionnaire—payroll)** Butler, CPA, has been engaged to audit the financial statements of Young Computer Outlets, Inc., a new client. Young is a privately owned chain of retail stores that sells a variety of computer software and video products. Young uses an in-house payroll department at its corporate headquarters to compute payroll data, and to prepare and distribute payroll checks to its 300 salaried employees.

Butler is preparing an internal control questionnaire to assist in obtaining an understanding of Young's internal control structure and in assessing control risk.

Required

Prepare a "Payroll" segment of Butler's internal control questionnaire that would assist in obtaining an understanding of Young's internal control structure and in assessing control risk. Do not prepare questions relating to cash payrolls, IT applications, payments based on hourly rates, piecework, commissions, employee benefits (pensions, health care, vacations, etc.), or payroll tax accruals other than withholdings.

Use the format in the following example:

- b. Using the following table, (1) identify evidence that the auditor would obtain while performing the audit, (2) identify the audit objectives to which the evidence pertains, and (3) develop an example of how the evidence would support value-added services for the client.

PRODUCTION CYCLE

EVIDENCE OBTAINED DURING THE AUDIT	AUDIT OBJECTIVE SATISFIED WITH THE EVIDENCE	EXAMPLE OF HOW EVIDENCE WOULD SUPPORT OTHER SERVICES
1.		
2.		

PERSONNEL SERVICES CYCLE

EVIDENCE OBTAINED DURING THE AUDIT	AUDIT OBJECTIVE SATISFIED WITH THE EVIDENCE	EXAMPLE OF HOW EVIDENCE WOULD SUPPORT OTHER SERVICES
1.		
2.		

CASES

- 16-37 **(Mt. Hood Furniture—PPS sampling problem)** Complete Case 13-35 at the end of Chapter 13, which involves this application of PPS sampling to the inventory of Mt. Hood Furniture.
- 16-38 **(Risk assessments and substantive tests for the production cycle)** Circuits Technologies, Inc.

Part I: Company History and Background

You are about to begin the audit of Circuits Technology Inc. for the year ended December 31, 2002. Circuits Technology Inc. (CTI), resells, installs, and provides computer networking products (client software, gateway hardware and software, and twinax hardware) to other businesses. Jessica Freeman founded the business in the late 1980s and grew the business to a stable and profitable enterprise in a major metropolitan area. Jessica owns 60 percent of the business, and four other shareholders (a brother, a sister, her father, and a friend) own 10 percent each. The minority shareholders contributed capital to the company when it was getting started, and the owners make up the board of directors. They usually meet only once a year to discuss dividends to be declared. During the rest of the year, the minority owners leave the day-to-day management decisions to Jessica as she also has controlling interest in the company.

The business grew rapidly during the 1990s. In 1999, near the end of the company's growth stage, Jessica was approached about merging the business with a larger company, but she decided that she did not want to merge the company, even if it meant limiting the growth of the business. CTI was her baby. Jessica enjoyed being CEO, she knew the business inside and out, and she did not want to be subordinate to someone else. The business was organized as a Subchapter S Corporation, and it was distributing a nice return to shareholders, so family members and friends were happy with her decisions. Jessica had her fingers in every aspect of the business, and she was boss.

Question 16-24 provides a history of CTI's last five years' financial history. CTI was a solid performing business up until 2001. Then the entire industry slowed down. All the demand that had been generated by the Y2K issues had been met, and the steady business and cash flow did not come as easily. Jessica and her sales staff had to work harder to close deals, and the industry became more competitive.

Rob Kaiser, the CFO, began complaining about Jessica's increasing intrusion into the company's finances in late 2000. During the period of steady performance, he and Jessica met quarterly to discuss the company's performance and finances. They would go over the entity's operating performance, its investing activities, and cash management, and the primary focus of attention was the annual distribution of earnings to shareholders. On occasion Jessica would want to structure a client contract in a particular way, or she would come in and insist on an additional discount for a particular customer, but Jessica had let Rob manage the finances of the business.

Now things had changed, particularly in the competitive environment where numerous vendors were chasing each customer. Jessica regularly discussed the accounting for particular transactions. It was not uncommon for her to come in and tell someone in accounting to change a sales invoice to offer a particular price discount to a customer. Furthermore, there were often heated discussions between Rob and Jessica over the monthly financial statements. Jessica knew the business and sometimes would not accept his explanations for draft financial statements that showed performance falling below Jessica's expectations. She had built the business, was involved in key decisions, and knew what profit margins should result. For example, gross margins should not fall below 52 percent as they did in 2000. In her view this was due to problems in the accounting system.

In some cases, Jessica was correct. Accounting was not a high priority. The first priority had to be sales and customer satisfaction. Jessica swallowed hard when she had to hire Rob, but it was clear that it would be more cost effective to hire someone in-house to manage finances than to subcontract to a CPA firm. However, accounting never had a significant budget. It could invest in technology and software, but it was always several people short of full staffing for the accounting system. Bob and his two salaried employees were cross-trained on most aspects of the accounting system, and everyone worked long hours. As a result, errors happened. The previous audit surfaced problems in the purchasing cycle, and some vendor's invoices had been paid twice. These problems usually surrounded rush purchases for clients where the vendor was asking for significant up-front payments. The audit also noted some cutoff problems in sales and purchases, and proposed an audit adjustment to the allowance for doubtful accounts. In Rob's opinion, this was the result of his department being stretched too thin.

In recent years, Jessica has paid considerable attention to the financial performance in the last two quarters of the year. Her major concern has focused on the company's profitability and ability to pay shareholder distributions. During the year-end close last year, Jessica was stopping by Rob's office daily to ask about the journal entries that were being made that day and their impact on earnings. This just added to the pressure on Rob to "get the job done."

Rob was also concerned about managing the relationship with First State Bank. Over the years the business relationship changed from one where CTI had significant deposits with First State Bank and used occasional seasonal borrowing to one where the line of credit has not been retired in the last 18 months. First State Bank, which had previously been satisfied with reviewed financial statements, now would like to have audited financial statements. This is another cost that Jessica and Rob don't want, but they have no choice. Furthermore, First State Bank established the following debt covenants.

- Dividends are restricted to 90 percent of net income.
- CTI must keep a minimum current ratio of 2.50 : 1.
- CTI must keep a minimum quick ratio of 1.2 : 1.
- CTI's debt to equity ratio cannot exceed 1.00 : 1.

Rob kept tight control on cash. An independent bank reconciliation was performed monthly. Furthermore, Bob closely tracked when vendor payments were due. With the exception of 1999, he had been able to keep the accounts payable turn days somewhere between 30 and 38 days. Rob would have liked to collect receivables faster, but the nature of the company's service, which involves installation of hardware and software to the customer's satisfaction, resulted in collection periods approaching 90 days. The company did not rely on programmed control procedures to monitor individual transactions. CTI did not have the staff to follow up on exception reports that might be generated by the accounting system. The primary controls in place involved Rob's independent review of transactions on a monthly basis. In addition, Jessica kept a close eye on revenues, expenses, and profit margins, and she demanded explanations from Rob when actual results deviated from her expectations.

Required

1. Evaluate the effectiveness of the CTI's control environment.
2. Analytical procedures: Complete Question 16-24.
3. Assess risk at the financial statement level.
 - a. Evaluate inherent risk at the financial statement level.
 - b. Evaluate the risk of fraud. Specifically consider each aspect of the fraud triangle; (1) incentives and pressures, (2) opportunity, and (3) attitudes and rationalization.
4. What is the potential for the effectiveness of the management performance reviews performed by Rob and Jessica with respect to the following assertions?
 - Existence of inventory
 - Valuation of inventory and cost of sales
5. Prepare a letter with any internal control recommendations that you have for management. Each specific recommendation should describe the current system, explain the risk involved, and make specific recommendations for improvement. You may assume that issues have already been discussed with management regarding the audit adjustments found in prior audits, so focus your attention on other issues that are of concern to you.

Part II: Substantive Tests

CTI prices its inventory at FIFO. You select a random sample of 35 items for price testing and find the following results as of year-end, 2002 (see Exhibit 16-38 on page 800). The total value of inventory is \$1,027,000. You should assume that errors exist in the unsampled portion of the population in the same proportion that they exist in the sample.

Required

6. Evaluate the implications of the evidence you noted above.
 - What are the implications of your direct findings for fair presentation in the financial statements? You may assume that it is your best guess that errors found in your sample are representative of errors that would exist in items that you did not sample.
 - Based on your findings, what additional audit procedures should be performed, if any?
7. What issues do you want to discuss with company management and the board of directors? Draft your management letter comments regarding the issues that you want to discuss with the company management, and indicate (in the margin) who you would have the conversations with.
8. As the auditor for CTI, what conversations or correspondence, if any, should you have with First State Bank?

EXHIBIT 16-38

	SKU #	QUANTITY PER CLIENT	PRICE PER CLIENT	QUANTITY × PRICE	QUANTITY PER AUDITOR	PRICE PER AUDITOR	QUANTITY × PRICE
1	10001	6	\$ 1,252.00	\$ 7,512.00	6	\$ 1,252.00	\$ 7,512.00
2	10269	4	\$ 1,275.00	\$ 5,100.00	4	\$ 1,275.00	\$ 5,100.00
3	10537	7	\$ 1,279.00	\$ 8,953.00	7	\$ 1,279.00	\$ 8,953.00
4	10805	8	\$ 2,200.00	\$ 17,600.00	8	\$ 1,200.00	\$ 9,600.00
5	11073	3	\$ 1,400.00	\$ 4,200.00	3	\$ 1,400.00	\$ 4,200.00
6	11341	8	\$ 1,410.00	\$ 11,280.00	8	\$ 1,410.00	\$ 11,280.00
7	11609	4	\$ 1,400.00	\$ 5,600.00	4	\$ 1,400.00	\$ 5,600.00
8	11877	9	\$ 810.00	\$ 7,290.00	9	\$ 510.00	\$ 4,590.00
9	12145	10	\$ 750.00	\$ 7,500.00	10	\$ 500.00	\$ 5,000.00
10	12413	9	\$ 750.00	\$ 6,750.00	9	\$ 750.00	\$ 6,750.00
11	12681	8	\$ 800.00	\$ 6,400.00	8	\$ 800.00	\$ 6,400.00
12	12949	7	\$ 1,800.00	\$ 12,600.00	7	\$ 800.00	\$ 5,600.00
13	13217	4	\$ 2,750.00	\$ 11,000.00	4	\$ 1,750.00	\$ 7,000.00
14	13485	5	\$ 2,750.00	\$ 13,750.00	5	\$ 1,750.00	\$ 8,750.00
15	13753	6	\$ 800.00	\$ 4,800.00	6	\$ 800.00	\$ 4,800.00
16	14021	2	\$ 800.00	\$ 1,600.00	2	\$ 800.00	\$ 1,600.00
17	14289	3	\$ 900.00	\$ 2,700.00	3	\$ 900.00	\$ 2,700.00
18	14557	1	\$ 900.00	\$ 900.00	1	\$ 900.00	\$ 900.00
19	14825	5	\$ 1,000.00	\$ 5,000.00	5	\$ 900.00	\$ 4,500.00
20	15093	18	\$ 1,000.00	\$ 18,000.00	18	\$ 1,000.00	\$ 18,000.00
21	15361	16	\$ 1,250.00	\$ 20,000.00	16	\$ 1,000.00	\$ 16,000.00
22	15629	14	\$ 1,250.00	\$ 17,500.00	14	\$ 1,000.00	\$ 14,000.00
23	15897	9	\$ 2,000.00	\$ 18,000.00	9	\$ 1,750.00	\$ 15,750.00
24	16165	5	\$ 2,000.00	\$ 10,000.00	5	\$ 1,750.00	\$ 8,750.00
25	16433	2	\$ 3,000.00	\$ 6,000.00	2	\$ 3,000.00	\$ 6,000.00
26	16701	8	\$ 250.00	\$ 2,000.00	8	\$ 250.00	\$ 2,000.00
27	16969	8	\$ 275.00	\$ 2,200.00	8	\$ 275.00	\$ 2,200.00
28	17237	8	\$ 270.00	\$ 2,160.00	8	\$ 270.00	\$ 2,160.00
29	17505	15	\$ 200.00	\$ 3,000.00	15	\$ 100.00	\$ 1,500.00
30	17773	12	\$ 400.00	\$ 4,800.00	12	\$ 250.00	\$ 3,000.00
31	18041	12	\$ 410.00	\$ 4,920.00	12	\$ 250.00	\$ 3,000.00
32	18309	11	\$ 400.00	\$ 4,400.00	11	\$ 310.00	\$ 3,410.00
33	18577	9	\$ 410.00	\$ 3,690.00	9	\$ 310.00	\$ 2,790.00
34	18845	6	\$ 750.00	\$ 4,500.00	6	\$ 650.00	\$ 3,900.00
35	19113	4	\$ 750.00	\$ 3,000.00	4	\$ 750.00	\$ 3,000.00
Total				<u>\$ 264,705.00</u>			<u>\$ 216,295.00</u>

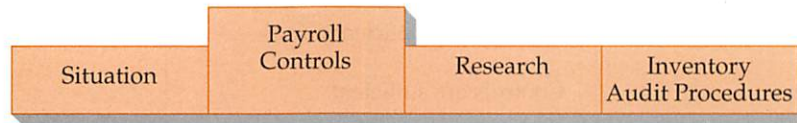
Additional Findings for Part 6

In addition, you find a journal entry where Rob has capitalized half of December's payroll for six network installers who work on two contracts as part of work in progress. Gross payroll amounts to \$15,600 plus 35 percent for the cost of payroll taxes and benefits. The total of payroll included in work in process amounted to \$21,060. Further investigation shows that the client was billed for all work performed on those contracts as of December 31, 2002.

professional simulations



The Vane Corporation is a manufacturing concern that has been in business for the past 18 years. During this period, the company has grown from a very small family-owned operation to a medium-sized manufacturing concern with several departments. Despite this growth, a substantial number of the procedures employed by Vane Corporation have been in effect since the business was started.



Under the supervision of a new CFO, Roger Bowman, Vane is in the process of planning to upgrade its systems. In this process, they are looking for your input as their auditor. The payroll function that has been in place for a number of years operates in the following manner.

Each worker picks up a weekly time card on Monday morning and writes in his name and identification number. These blank cards are kept near the factory entrance. The workers write on the time card the time of their daily arrival and departure. The workers also complete a job time ticket for each individual job they work on each day. The job time tickets are collected daily and sent to cost accounting, where they are used to prepare a cost distribution analysis. On the following Monday, the factory foremen collect the completed cards for the previous week and send them to data processing.

In data processing, the time cards are used to input hours worked and prepare paychecks weekly. Payroll is processed with access to the master payroll file, which includes worker identification numbers and wage rates. The checks are written by the computer on the regular checking account and imprinted with the treasurer's signature. After the payroll file is updated and the checks are prepared, the checks are sent to the factory foremen, who distribute them to the workers or hold them for the workers to pick up later if they are absent.

The foremen notify data processing of new employees and terminations. Any changes in hourly pay rate or any other changes affecting payroll are usually communicated to data processing by the foremen. Further analysis of the payroll function reveals the following:

1. A worker's gross wages never exceed \$2000 per week.
2. Raises never exceed \$0.55 per hour for the factory workers.
3. No more than 20 hours of overtime are allowed each week.
4. The factory employs 150 workers in ten departments.

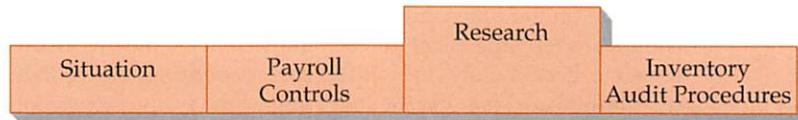
Based on a system walkthrough and inquiries of people who work in the system you have also identified the following errors and inconsistencies that have been encountered in the past few pay periods:

1. A worker's paycheck was not processed properly because he had transposed two numbers in his identification number when he filled out his time card.
2. A worker was issued a check for \$2,531.80 when it should have been \$253.81.
3. One worker's paycheck was not written, and this error was not detected until the paychecks for that department were distributed by the foreman.

4. One worker received a paycheck for an amount considerably larger than he should have. Further investigation revealed that 84 had been punched instead of 48 for hours worked.
5. In processing nonroutine changes, a computer operator included a pay rate increase for one of his friends in the factory. This was discovered by chance by another employee.

For the following three assertions identify whether you believe Vane has sufficient internal controls or whether it has a significant deficiency in internal controls. For each assertion with a significant deficiency, develop a recommendation to improve the adequacy of control activities. Use the following format.

ASSERTION	ADEQUACY OF CONTROLS	RECOMMEND IMPROVEMENTS FOR SIGNIFICANT DEFICIENCIES
Existence and Occurrence	Controls are sufficient <input type="radio"/> A significant deficiency exists <input type="radio"/>	
Completeness	Controls are sufficient <input type="radio"/> A significant deficiency exists <input type="radio"/>	
Valuation or Allocation	Controls are sufficient <input type="radio"/> A significant deficiency exists <input type="radio"/>	



Vane’s new CFO, Roger Bowman, has decided to use statistical sampling to estimate the quantities of inventory on hand at year-end, rather than count the entire inventory. Is it appropriate for Roger to not count the entire inventory? What are the audit implications if Roger proceeds to use statistical sampling to estimate the quantities of inventory on hand? Cut and paste the U.S. auditing standards sections that apply to this issue.



Audit procedure

- A. Understand the key economic drivers that influence the entity’s cost of sales, gross margins, and the possibility of obsolete inventory.
- B. On a test basis, trace data from purchases, manufacturing, completed production, and sales records to inventory accounts.
- C. Vouch the items on the final inventory listing to inventory tags, count sheets, and test counts taken during the inventory observation.
- D. Trace test counts taken during the inventory observation to the final inventory listing.
- E. Examine sales invoices after year-end and determine the net realizable value of inventory.

