AQE Review
Financial Accounting

Accountancy Qualifying Exam Review
Assets = Liabilities + Owners’ Equity
Accounting Equation (A.L.O.E)

ASSETS = 
- Current
- Long Term
- PP&E
- Intangibles

LIABILITIES +
- Current
- Long Term

OWNERS’ EQUITY
- Common Stock (Paid in Capital)
- Retained Earnings (RE)
- BOY RE +/– Net Income (NI) – Dividends = EOY RE
Accounting Equation (A.L.O.E)

\[
\text{ASSETS} = 1,000 \quad \text{LIABILITIES} + 250 \quad \text{OWNERS’ EQUITY} \quad \text{?}
\]
Accounting Equation (A.L.O.E)

\[
\text{ASSETS} = \text{LIABILITIES + OWNERS' EQUITY}
\]

\[
\begin{align*}
1,000 & \quad 250 & \quad 750
\end{align*}
\]
Companies prepare four financial statements from the summarized accounting data:
**Income Statement**

SIERRA CORPORATION
Income Statement
For the Month Ended October 31, 2012

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td></td>
</tr>
<tr>
<td>Service revenue</td>
<td>$10,600</td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
</tr>
<tr>
<td>Salaries expense</td>
<td>$5,200</td>
</tr>
<tr>
<td>Supplies expense</td>
<td>1,500</td>
</tr>
<tr>
<td>Rent expense</td>
<td>900</td>
</tr>
<tr>
<td>Insurance expense</td>
<td>50</td>
</tr>
<tr>
<td>Interest expense</td>
<td>50</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>40</td>
</tr>
<tr>
<td>Total expenses</td>
<td>7,740</td>
</tr>
<tr>
<td>Net income</td>
<td>$2,860</td>
</tr>
</tbody>
</table>

- **Net income**: revenues exceed expenses
- **Net loss**: expenses exceed revenues

**EPS!**
Net income – Prfd dividends
Avg common shares O/S

Dividends paid to investors are not part of net income
Retained Earnings Statement

- Statement shows amounts and reasons why retained earnings has increased or decreased during the period.
- Time period is the same as that covered by the income statement.

### SIERRA CORPORATION
Retained Earnings Statement
For the Month Ended October 31, 2012

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained earnings, October 1</td>
<td>$ 0</td>
</tr>
<tr>
<td>Add: Net income</td>
<td>$ 2,860</td>
</tr>
<tr>
<td></td>
<td>$ 2,860</td>
</tr>
<tr>
<td>Less: Dividends</td>
<td>$ 500</td>
</tr>
<tr>
<td>Retained earnings, October 31</td>
<td>$2,360</td>
</tr>
</tbody>
</table>
## Balance Sheet

### SIERRA CORPORATION
Balance Sheet  
October 31, 2012

<table>
<thead>
<tr>
<th>Assets</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$15,200</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>200</td>
</tr>
<tr>
<td>Supplies</td>
<td>1,000</td>
</tr>
<tr>
<td>Prepaid insurance</td>
<td>550</td>
</tr>
<tr>
<td>Equipment, net</td>
<td>4,960</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>$21,910</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities and Stockholders’ Equity</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liabilities</td>
<td></td>
</tr>
<tr>
<td>Notes payable</td>
<td>$5,000</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>2,500</td>
</tr>
<tr>
<td>Salaries payable</td>
<td>1,200</td>
</tr>
<tr>
<td>Unearned service revenue</td>
<td>800</td>
</tr>
<tr>
<td>Interest payable</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td><strong>$9,550</strong></td>
</tr>
<tr>
<td>Stockholders’ equity</td>
<td></td>
</tr>
<tr>
<td>Common stock</td>
<td>10,000</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>2,360</td>
</tr>
<tr>
<td><strong>Total stockholders’ equity</strong></td>
<td><strong>12,360</strong></td>
</tr>
<tr>
<td><strong>Total liabilities and stockholders’ equity</strong></td>
<td><strong>$21,910</strong></td>
</tr>
</tbody>
</table>

- Reports assets, liabilities, and stockholders’ equity at a specific date (a snapshot).
- Assets listed first, followed by liabilities and stockholders’ equity.
- Total assets must equal total liabilities and stockholders’ equity.

**Current ratio**

**Debt-to-Assets ratio**
### Statement of Cash Flows

**SIERRA CORPORATION**

Statement of Cash Flows  
For the Month Ended October 31, 2012

<table>
<thead>
<tr>
<th>Cash flows from <strong>operating</strong> activities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash receipts from operating activities</td>
<td>$11,200</td>
<td></td>
</tr>
<tr>
<td>Cash payments for operating activities</td>
<td>(5,500)</td>
<td></td>
</tr>
<tr>
<td><strong>Net cash provided by operating activities</strong></td>
<td><strong>$ 5,700</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash flows from <strong>investing</strong> activities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased office equipment</td>
<td>(5,000)</td>
<td></td>
</tr>
<tr>
<td><strong>Net cash used by investing activities</strong></td>
<td><strong>(5,000)</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash flows from <strong>financing</strong> activities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuance of common stock</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>Issued note payable</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>Payment of dividend</td>
<td>(500)</td>
<td></td>
</tr>
<tr>
<td><strong>Net cash provided by financing activities</strong></td>
<td><strong>14,500</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Net increase in cash**  
15,200

**Cash at beginning of period**  
0

**Cash at end of period**  
$15,200

- **Reports cash flows by** operating, investing and financing activities.
- **Net change in cash for each category is combined to report overall change in cash.**
- **Change in cash is added to beginning cash balance to determine ending cash balance.**
Comparison between Direct & Indirect

Direct

Operating Activities

+/-

Investing Activities

+/-

Financing Activities

+/-

Indirect

Net Income

+/-

ADJUSTMENTS to reconcile net income to net cash provided by Operating Activities

Investing Activities

+/-

Financing Activities

+/-
XYZ Corp recorded the following transactions during the year:

- Issued common stock for cash of 10,000.
- Purchased supplies on account for 500.
- Recorded revenues of 25,000 and expenses of 15,000.
- Paid dividends to shareholders of 3,000

Based on these transactions what is net income during the year?
Review Question – Income Statement

XYZ Corp recorded the following transactions during the year:

• Issued common stock for cash of 10,000.
• Purchased supplies on account for 500.
• Recorded revenues of 25,000 and expenses of 15,000.
• Paid dividends to shareholders of 3,000

Based on these transactions what is net income during the year? $10,000 (Revenues less expenses)
Classify each of these transactions by type of cash flow activity.

1. Issued 100,000 shares of $5 par value common stock for $800,000 cash.  
   - Financing

2. Borrowed $200,000 from Castle Bank, signing a 5-year note bearing 8% interest.  
   - Financing

3. Purchased two semi-trailer trucks for $170,000 cash.  
   - Investing

4. Paid employees $12,000 for salaries and wages.  
   - Operating

5. Collected $20,000 cash for services performed.  
   - Operating
Qualities of Useful Information

The primary objective of financial reporting is to provide information that is useful for decision making.

Relevance –
- Predictive value
- Confirmatory value

Has ability to make a difference in a decision scenario

Faithful Representation –
- Complete
- Neutral (unbiased)

“Accurately” represents events that happened

Consistency = a company uses the same accounting principles and methods from year to year.
Assumptions and Principles in Financial Reporting

- Monetary Unit Assumption
- Going Concern Assumption
- Accrual Basis Assumption
- Cost Principle
- Full Disclosure Principle
The following items guide the FASB when it creates accounting standards.

- Relevance
- Faithful representation
- Comparability
- Consistency
- Monetary unit assumption
- Economic entity assumption

Periodicity assumption
Going concern assumption
Historical cost principle
Full disclosure principle
Materiality

Match each item above with a description below.

1. Ability to easily evaluate one company’s results relative to another’s. \[\text{Comparability}\]
2. Belief that a company will continue to operate for the foreseeable future. \[\text{Going concern}\]
3. The judgment concerning whether an item is large enough to matter to decision-makers. \[\text{Materiality}\]
Financial Accounting Concepts and Principles

The following items guide the FASB when it creates accounting standards.

- Relevance
- Faithful representation
- Comparability
- Consistency
- Monetary unit assumption
- Economic entity assumption
- Periodicity assumption
- Going concern assumption
- Historical cost principle
- Full disclosure principle
- Materiality

Match each item above with a description below.

4. The reporting of all information that would make a difference to financial statement users.  
   **Full disclosure**

5. The practice of preparing financial statements at regular intervals.  
   **Periodicity**

6. The quality of information that indicates the information makes a difference in a decision.  
   **Relevance**
The following items guide the FASB when it creates accounting standards.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>Belief that items should be reported on the balance sheet at the price that was paid to acquire the item.</td>
</tr>
<tr>
<td>Faithful representation</td>
<td>A company’s use of the same accounting principles and methods from year to year.</td>
</tr>
<tr>
<td>Comparability</td>
<td>Tracing accounting events to particular companies.</td>
</tr>
<tr>
<td>Consistency</td>
<td>A company’s use of the same accounting principles and methods from year to year.</td>
</tr>
<tr>
<td>Monetary unit assumption</td>
<td>Tracing accounting events to particular companies.</td>
</tr>
<tr>
<td>Economic entity assumption</td>
<td>Tracing accounting events to particular companies.</td>
</tr>
</tbody>
</table>

7. Belief that items should be reported on the balance sheet at the price that was paid to acquire the item.

8. A company’s use of the same accounting principles and methods from year to year.

9. Tracing accounting events to particular companies.
The T Account

Account Name

Debits are entered on left

Credits are entered on right
Relationship among the assets, liabilities and stockholders’ equity of a business:

**Basic Equation**

\[ \text{Assets} = \text{Liabilities} + \text{Stockholders' Equity} \]

**Expanded Basic Equation**

- **Assets**
  - Dr. +
  - Cr. -

- **Liabilities**
  - Dr. -
  - Cr. +

- **Common Stock**
  - Dr. -
  - Cr. +

- **Retained Earnings**
  - Dr. -
  - Cr. +

- **Dividends**
  - Dr. +
  - Cr. -

- **Revenues**
  - Dr. +
  - Cr. -

- **Expenses**
  - Dr. -
  - Cr. +

The equation must be in balance after every transaction. **Debits and Credits must always equal.**

Each account has a “normal balance” (either debit or credit). E.g., Cash has a debit normal balance (so increases to Cash are debits.)
Accounting Equation (A.L.O.E)

ASSETS = LIABILITIES + OWNERS’ EQUITY

Dr.          Cr.          Cr.

Common Stock  +  Retained Earnings (RE)

Cr.

HELPFUL HINT
The normal balance is the side where increases in the account are recorded.
Review Question

Debits:

a. increase both assets and liabilities.

b. decrease both assets and liabilities.

c. increase assets and decrease liabilities.

d. decrease assets and increase liabilities.
SUMMARY OF DEBIT/CREDIT RULES

Review Question

Accounts that normally have debit balances are:

a. assets, expenses, and revenues.

b. assets, expenses, and equity.

c. assets, liabilities, and dividends.

d. assets, dividends, and expenses.
SUMMARY OF DEBIT/CREDIT RULES

Review Question

Accounts that normally have credit balances are:

a. liabilities, common stock, and revenues.

b. liabilities, expenses, and assets.

c. liabilities, dividends, and revenues.

d. assets, common stock, and revenues.

LO 2
Accrual Basis Accounting!!

ACCRLUAL BASIS IS REQUIRED BY GAAP

Transactions are recorded in the periods in which the events occur.

- **Revenues** are recognized in the accounting period in which they are **earned** (i.e., when satisfy the performance obligation) – regardless of when the cash is received!

- **Expenses** are recognized in the same accounting period as their related revenues (i.e., when the expenses are **incurred**, to **match** the revenues) -- regardless of when the cash is paid!

Some account balances may need to be adjusted at the end of an accounting period. (e.g., adjust prepaid insurance)
# Types of Adjusting Entries (AJEs)

<table>
<thead>
<tr>
<th>Deferrals</th>
<th>Accruals</th>
</tr>
</thead>
</table>
| 1. **Prepaid Expenses**  
Cash paid and recorded as assets -- **before** expense is incurred (as asset is used). | 3. **Accrued Revenues**  
Revenues earned **but not yet** received in cash. |
| 2. **Unearned Revenues**  
Cash received and recorded as liabilities **before** revenue is earned. | 4. **Accrued Expenses**  
Expenses incurred **but not yet** paid in cash. |
Prepaid Expenses

Payment of cash is recorded as an asset because service or benefit will be received in the future (over multiple periods).

| Cash Payment | BEFORE | Expense Recorded |

Prepayments often occur in regard to:

- insurance
- rent
- supplies
- property & equipment

The asset (prepayment) is reduced as the asset is “used up” over time.
Prepaid Expenses

At the end of the period, determine how much of the asset has been used or has expired.

Adjusting journal entry (AJE) results in an increase (a debit) to an expense account and a decrease (a credit) to an asset account.
Example: On May 1\textsuperscript{st}, Smith Corp. began operations and paid $3,000 for office supplies. Show the journal entry to record the payment on May 1\textsuperscript{st}.

\[
\begin{array}{ccc}
\text{May 1} & \text{Office Supplies} & 3,000 \\
\text{Cash} & 3,000 &
\end{array}
\]
Example: Supplies on hand at May 31st are $850. Show the adjusting journal entry to record supplies used during the month of May.

$3,000 - $850 = $2,150

May 31

Office Supplies Expense 2,150
Office Supplies 2,150
Unearned Revenues

Receipt of cash that is recorded as a liability because the revenue has not yet been earned.

Unearned revenues often occur in regard to:
- rent
- customer deposits
- magazine subscriptions
- season tickets
- airfare
- gift cards!

Unearned revenue is a liability because it’s a performance obligation. To earn the revenue, must satisfy the performance obligation.
Unearned Revenues

At the end of the period, determine how much revenue has been earned.

Adjusting entry results in a decrease (a debit) to a liability account and an increase (a credit) to a revenue account.
Unearned Revenues - Subscriptions

Example: On Feb. 1st, Spellman Magazine Corp. began operations and received $36,000 from customers for 12-month subscriptions to “I Love Accounting!” magazine. Show the journal entry to record the receipt on Feb 1st.

Feb. 1    Cash       36,000
          Unearned Subscription Revenue  36,000
Unearned Revenues - Subscriptions

Example: Show the adjusting journal entry to record the revenue earned in March when the magazines for the month were mailed to customers.

$36,000 \times \frac{1}{12} = $3,000

Mar. 31  Unearned Subscription Revenue 3,000

Subscription Revenue 3,000

Unearned Subscription Revenue 3,000

Subscription Revenue 36,000

33,000
Accrued Revenues

Revenues *earned* but not yet received in cash.

Accrued revenues often occur in regard to:

- services performed (e.g., consulting)
- goods delivered to customers “on account”
- interest
- rent
At the end of the period, adjusting entry records receivable and revenue earned.

Adjusting entry results in an increase (a debit) to an asset account and an increase (a credit) to a revenue account.

Accrued Revenues

<table>
<thead>
<tr>
<th>Asset</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debit Adjusting Entry (+)</td>
<td>Credit Adjusting Entry (+)</td>
</tr>
</tbody>
</table>
Accrued Revenues - Services

**Example:** During April, Sam Ryan, CPA, provided tax services of $4,000 to clients that were not billed or recorded before April 30. Show the adjusting journal entry to record the service revenue earned in April.

*April 30*  
Accounts Receivable  4,000  
Service Revenue  4,000
**Accrued Revenues - Services**

**Example:** Show the entry to record the receipt of cash from customers in May for the services provided in April.

<table>
<thead>
<tr>
<th>Date</th>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 31</td>
<td>Cash</td>
<td>4,000</td>
</tr>
<tr>
<td></td>
<td>Accounts Receivable</td>
<td>4,000</td>
</tr>
</tbody>
</table>

![Cash Accounts Receivable T-account](attachment:image.png)
Accrued Expenses

Expenses incurred but not yet paid in cash.

Accrued expenses often occur in regard to:
- interest
- taxes
- salaries
- utilities (gas, electricity, water)
Accrued Expenses

- At the end of the period, adjusting entry records expense incurred and liability.
- Adjusting entry results in an increase (a debit) to an expense account and an increase (a credit) to a liability account.

![Diagram of Accrued Expenses]

<table>
<thead>
<tr>
<th>Expense</th>
<th>Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debit Adjusting Entry (+)</td>
<td>Credit Adjusting Entry (+)</td>
</tr>
</tbody>
</table>
Example: On July 1\textsuperscript{st}, Tempe Company borrows $60,000 from Phoenix Corp. The loan will mature in 2 months with interest at 10%. Show the journal entry to record the borrowing on July 1\textsuperscript{st}.

\[ \text{July 1} \quad \text{Cash} \quad 60,000 \]
\[ \text{Notes Payable} \quad 60,000 \]

Principal $x$ Rate $x$ Time in Years = Interest

\[ \$60,000 \times 10\% \times \frac{2}{12} = \$1,000 \]
**Accrued Expenses - Interest**

**Example:** Show the adjusting journal entry to record the interest expense incurred in July.

\[
\text{Principal} \times \text{Rate} \times \text{Time in Years} = \text{Interest}
\]

\[
60,000 \times 10\% \times \frac{1}{12} = 500
\]

July 31

<table>
<thead>
<tr>
<th>Interest Expense</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Payable</td>
<td>500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interest Expense</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Payable</td>
<td>500</td>
</tr>
</tbody>
</table>
## Adjusting Journal Entries (AJEs) -- Summary of Basic Relationships

<table>
<thead>
<tr>
<th>Type of Adjustment</th>
<th>Accounts Before Adjustment</th>
<th>Adjusting Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepaid expenses</td>
<td>Assets overstated</td>
<td>Dr. Expenses</td>
</tr>
<tr>
<td></td>
<td>Expenses understated</td>
<td>Cr. Assets</td>
</tr>
<tr>
<td>Unearned revenues</td>
<td>Liabilities overstated</td>
<td>Dr. Liabilities</td>
</tr>
<tr>
<td></td>
<td>Revenues understated</td>
<td>Cr. Revenues</td>
</tr>
<tr>
<td>Accrued revenues</td>
<td>Assets understated</td>
<td>Dr. Assets</td>
</tr>
<tr>
<td></td>
<td>Revenues understated</td>
<td>Cr. Revenues</td>
</tr>
<tr>
<td>Accrued expenses</td>
<td>Expenses understated</td>
<td>Dr. Expenses</td>
</tr>
<tr>
<td></td>
<td>Liabilities understated</td>
<td>Cr. Liabilities</td>
</tr>
</tbody>
</table>

AJE’s use 1 (or more) **Income Statement** account, and 1 (or more) **Balance Sheet** account. But note that none of these AJEs use the Cash account!
Reconciliation Procedures

Per Bank Statement
- Deposit in Transit
- Outstanding Checks
+/- Bank Errors

Adjustments to the bank balance

Cash Balances

Per Books
+ Notes collected by bank
- NSF (bounced) checks
- Check printing or other service charges
+/- Book Errors

Adjustments to the book balance

CORRECT BALANCE
ADJUSTED BALANCE PER BANK

NIU
College of Business
Northern Illinois University
Illustration: Prepare a bank reconciliation at April 30.

Cash balance per bank statement $15,907.45
+ Deposit in transit 2,201.40
- Outstanding checks (5,904.00)

Adjusted cash balance per bank $12,204.85

Cash balance per books $11,589.45
+ Error in check No. 443 36.00
- NSF check (425.60)
- Bank service charge (30.00)
+ Collection of notes receivable 1,035.00

Adjusted cash balance per books $12,204.85
Accounts Receivable (A/R)

Amounts owed by customers *on account* that result from the sale of goods or services

I.e., the seller is relying on the customer’s credit – the seller is providing the goods or services now, but *getting paid later* (or at least they *expect* to be paid!)

Expected to be collected within 30-90 days

Often called trade receivables
Valuation of Receivables

There are two problems associated with making sales on credit (i.e., on account).

- Slows inflow of cash
- Risk of uncollectible accounts

Receivables are reported at NRV.

Net realizable value = the amount expected (estimated) to be received in cash.

I.e., NRV excludes the amount estimated to be uncollectible.

- Bad Debts Expense is considered a normal and necessary risk of doing business
Valuation of Receivables – Allowance Method

<table>
<thead>
<tr>
<th>Current assets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$14,800</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>$200,000</td>
</tr>
<tr>
<td>Less: Allowance for doubtful accounts</td>
<td>12,000</td>
</tr>
<tr>
<td>Merchandise inventory</td>
<td>310,000</td>
</tr>
<tr>
<td>Prepaid expense</td>
<td>25,000</td>
</tr>
<tr>
<td>Total current assets</td>
<td>$537,800</td>
</tr>
</tbody>
</table>

**Net Realizable Value**
Illustration: Assume the unadjusted trial balance shows Allowance for Doubtful Accounts with a credit balance of $528. Assume $2,228 is the estimate of uncollectible receivables, based on an analysis of the A/R aging.

<table>
<thead>
<tr>
<th>Date</th>
<th>Account Titles</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 31</td>
<td><strong>Bad Debts Expense</strong></td>
<td>1,700</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Allowance for Doubtful Accounts</strong></td>
<td></td>
<td>1,700</td>
</tr>
</tbody>
</table>
### Valuation of Receivables – Allowance Method

**Illustration:** On March 1, the VP of finance of Hampson Furniture authorizes a write-off of the $500 balance owed by customer R. A. Ware.

<table>
<thead>
<tr>
<th>Date</th>
<th>Account Titles</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar. 1</td>
<td>Allowance for Doubtful Accounts</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accounts Receivable - R. A. Ware</td>
<td></td>
<td>500</td>
</tr>
</tbody>
</table>

When write off a customer account, total NRV does not change.
Inventory Systems - Perpetual

- The Inventory account is increased for the cost of each inventory purchase and decreased for each sale.
- The ledger *continuously* shows the inventory that should be on hand.
- Revenue is recorded and **cost of goods sold** is determined *each time a sale occurs*.
- At the end of the year, the ledger will show ending inventory and cost of goods sold.
- A physical inventory is taken at year end to check the accuracy of the accounting records.
Inventory Systems - Periodic

- Inventory is beginning balance of inventory throughout the period (until…).
- Record purchases of merchandise in **Purchases** account.
- Purchase returns and allowances, Purchase discounts, and Freight costs are recorded in separate accounts.
- Record revenues when sales are made but do not adjust (decrease) inventory or record cost of merchandise (goods) sold on the date of sale.
- A physical inventory is taken at year end to determine the **cost of inventory** and the **cost of goods sold**.
Cash Discounts

Credit terms may allow buyer to claim a cash discount if payment is made within a specified period of time.

Advantages:

- Purchaser saves money
- Seller converts account receivable to cash more quickly

Example: Credit terms may read 2/10, n/30.
Review Question

D&B Auto Parts on July 15 sells merchandise on account to one of its customers, Hot Rod LLP for $100,000. The terms are 2/10, n/30. On July 20, Hot Rod returns merchandise worth $10,000 to D&B Auto Parts. If payment is received on July 24 from Hot Rod for the balance due, what is the amount of cash received on this day (July 24)?

Amount owed = 90,000 \( (100,000 - 10,000) \)
Discount = 1,800 \( (90,000 \times 0.02) \)
Cash received = 88,200 \( (90,000 - 1,800) \)
### Comparison of Entries – Purchase Transactions

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Perpetual Inventory System</th>
<th>Periodic Inventory System</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 May    Purchase of merchandise on credit.</td>
<td>Merchandise Inventory 3,800</td>
<td>Purchases 3,800</td>
</tr>
<tr>
<td></td>
<td>Accounts Payable 3,800</td>
<td>Accounts Payable 3,800</td>
</tr>
<tr>
<td>6 May    Freight costs on purchases.</td>
<td>Merchandise Inventory 150</td>
<td>Freight-in 150</td>
</tr>
<tr>
<td></td>
<td>Cash 150</td>
<td>Cash 150</td>
</tr>
<tr>
<td>8 May    Purchase returns and allowances.</td>
<td>Accounts Payable 300</td>
<td>Accounts Payable 300</td>
</tr>
<tr>
<td></td>
<td>Merchandise Inventory 300</td>
<td>Purchase Returns and Allowances 300</td>
</tr>
<tr>
<td>14 May   Payment on account with a discount.</td>
<td>Accounts Payable 3,500</td>
<td>Accounts Payable 3,500</td>
</tr>
<tr>
<td></td>
<td>Cash 3,430</td>
<td>Cash 3,430</td>
</tr>
<tr>
<td></td>
<td>Merchandise Inventory 70</td>
<td>Purchase Discounts 70</td>
</tr>
</tbody>
</table>
## Comparison of Entries – Sales Transactions

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Perpetual Inventory System</th>
<th>Periodic Inventory System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>May 4</strong> Sale of merchandise on credit.</td>
<td>Accounts Receivable 3,800</td>
<td>Accounts Receivable 3,800</td>
</tr>
<tr>
<td></td>
<td>Sales 3,800</td>
<td>Sales 3,800</td>
</tr>
<tr>
<td></td>
<td>Cost of Goods Sold 2,400</td>
<td>No entry for cost of goods sold</td>
</tr>
<tr>
<td></td>
<td>Merchandise Inventory 2,400</td>
<td></td>
</tr>
<tr>
<td><strong>May 8</strong> Return of merchandise sold.</td>
<td>Sales Returns and Allowances 300</td>
<td>Sales Returns and Allowances 300</td>
</tr>
<tr>
<td></td>
<td>Accounts Receivable 300</td>
<td>Accounts Receivable 300</td>
</tr>
<tr>
<td></td>
<td>Merchandise Inventory 140</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cost of Goods Sold 140</td>
<td>No entry</td>
</tr>
<tr>
<td><strong>May 14</strong> Cash received on account with a discount.</td>
<td>Cash 3,430</td>
<td>Cash 3,430</td>
</tr>
<tr>
<td></td>
<td>Sales Discounts 70</td>
<td>Sales Discounts 70</td>
</tr>
<tr>
<td></td>
<td>Accounts Receivable 3,500</td>
<td>Accounts Receivable 3,500</td>
</tr>
</tbody>
</table>
Income Measurement for Merchandising Companies

Net Sales \(-\) Cost of Goods Sold = Gross Profit

Gross Profit \(-\) Operating Expenses = Net Income (Loss)

Total cost of merchandise sold during the period

Selling and Administrative
Net Sales

Sales revenue $3,800
Less: Sales returns & allowances (300)
Sales discounts (70)
Net sales $3,430

Sales
- Sales
  - normal credit balance
Sales R & A
  - normal debit balance
Sales Discounts
  - normal debit balance

CONTRA REVENUE
Cost of Goods Sold

Beginning Inventory $36,000
Add: Cost of Goods Purchased 320,000
Cost of Goods Available for Sale 356,000
Deduct: Ending Inventory 40,000
Cost of Goods Sold $316,000
Components of Cost of Goods Purchased

**Purchases**
- **normal debit balance**

**Purchase Discounts**
- **normal credit balance**

**Purchase Returns & Allowances**
- **normal credit balance**

**Freight In**
- **normal debit balance**
# Cost of Goods Sold

**PW AUDIO SUPPLY, INC.**

**Cost of Goods Sold**

**For the Year Ended December 31, 2012**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inventory, January 1</strong></td>
<td>$36,000</td>
</tr>
<tr>
<td><strong>Purchases</strong></td>
<td>$325,000</td>
</tr>
<tr>
<td><strong>Less: Purchase returns and allowances</strong></td>
<td>$10,400</td>
</tr>
<tr>
<td><strong>Purchase discounts</strong></td>
<td>6,800</td>
</tr>
<tr>
<td><strong>Net purchases</strong></td>
<td>307,800</td>
</tr>
<tr>
<td><strong>Add: Freight-in</strong></td>
<td>12,200</td>
</tr>
<tr>
<td><strong>Cost of goods purchased</strong></td>
<td>320,000</td>
</tr>
<tr>
<td><strong>Cost of goods available for sale</strong></td>
<td>356,000</td>
</tr>
<tr>
<td><strong>Inventory, December 31</strong></td>
<td>40,000</td>
</tr>
<tr>
<td><strong>Cost of goods sold</strong></td>
<td>$316,000</td>
</tr>
</tbody>
</table>
Companies **choose** how to account for their inventory!

- Cost includes all expenditures necessary to acquire goods and place them in a condition ready for sale.
- Unit costs are applied to quantities to determine the total cost of the inventory and the cost of goods sold using the following costing methods:
  - Specific identification
  - First-in, first-out (FIFO)
  - Last-in, first-out (LIFO)
  - Average-cost

**Cost Flow Assumptions**

Once determine cost (using one of these methods), then apply **LOCOM** before reporting inventory.
The cost flow assumption (FIFO, LIFO, or Average Cost), will affect how Cost of Goods Available for Sale is allocated between Ending Inventory and CGS.
Cost Flow Assumptions

Illustration: Data for Houston Electronics’ Astro condensers.

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1</td>
<td>Beginning inventory</td>
<td>100</td>
<td>$10</td>
<td>$1,000</td>
</tr>
<tr>
<td>Apr. 15</td>
<td>Purchase</td>
<td>200</td>
<td>11</td>
<td>2,200</td>
</tr>
<tr>
<td>Aug. 24</td>
<td>Purchase</td>
<td>300</td>
<td>12</td>
<td>3,600</td>
</tr>
<tr>
<td>Nov. 27</td>
<td>Purchase</td>
<td>400</td>
<td>13</td>
<td>5,200</td>
</tr>
</tbody>
</table>

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total units available for sale</td>
<td>1,000</td>
<td></td>
<td></td>
<td>$12,000</td>
</tr>
<tr>
<td>Units in ending inventory</td>
<td>450</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Units sold</td>
<td>550</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Beginning Inventory + Purchases = Goods Available for Sale - Ending Inventory = Cost of Goods Sold
First In, First Out - FIFO

- Earliest goods purchased are first to be sold.
- Often parallels actual physical flow of merchandise.
- Generally good business practice to sell oldest unit first.
- example = Milk being sold out of the refrigerated dairy case at the grocery store.
# First In, First Out - FIFO

## Cost of Goods Available for Sale

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td>Jan. 1</td>
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<td>Nov. 27</td>
<td>Purchase</td>
<td>400</td>
<td>13</td>
<td>5,200</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,000</td>
<td></td>
<td>$12,000</td>
</tr>
</tbody>
</table>

## Step 1: Ending Inventory

<table>
<thead>
<tr>
<th>Date</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 27</td>
<td>400</td>
<td>$13</td>
<td>$5,200</td>
</tr>
<tr>
<td>Aug. 24</td>
<td>50</td>
<td>12</td>
<td>600</td>
</tr>
<tr>
<td>Total</td>
<td>450</td>
<td></td>
<td>$5,800</td>
</tr>
</tbody>
</table>

## Step 2: Cost of Goods Sold

- Cost of goods available for sale $12,000
- Less: Ending inventory $5,800
- Cost of goods sold $6,200
Last In, First Out - LIFO

- Latest goods purchased are first to be sold.
- Seldom coincides with actual physical flow of merchandise.
- example = soccer balls in a tall bin.
# Last In, First Out - LIFO

## Cost of Goods Available for Sale

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
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<tbody>
<tr>
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<td>13</td>
<td>5,200</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,000</td>
<td></td>
<td>$12,000</td>
</tr>
</tbody>
</table>

## Step 1: Ending Inventory

<table>
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<th>Date</th>
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<th>Unit Cost</th>
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</tr>
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<td>11</td>
<td>2,200</td>
</tr>
<tr>
<td>Aug. 24</td>
<td>150</td>
<td>12</td>
<td>1,800</td>
</tr>
<tr>
<td>Total</td>
<td>450</td>
<td></td>
<td>$5,000</td>
</tr>
</tbody>
</table>

## Step 2: Cost of Goods Sold

- Cost of goods available for sale: $12,000
- Less: Ending inventory: 5,000
- Cost of goods sold: $7,000
Average Cost

- Allocates cost of goods available for sale on the basis of weighted-average unit cost incurred.
- Assumes goods are similar in nature.
- Applies weighted-average unit cost to the units on hand to determine cost of the ending inventory.

\[
\text{Weighted Average} = \frac{\text{Cost of Goods Available for Sale}}{\text{Total Units Available for Sale}}
\]
# Average Cost

## Cost of Goods Available for Sale

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>Units</th>
<th>Unit Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1</td>
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<td>100</td>
<td>$10</td>
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</tr>
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<td>11</td>
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<td>12</td>
<td>3,600</td>
</tr>
<tr>
<td>Nov. 27</td>
<td>Purchase</td>
<td>400</td>
<td>13</td>
<td>5,200</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,000</td>
<td></td>
<td>$12,000</td>
</tr>
</tbody>
</table>

## Step 1: Ending Inventory

\[
\frac{$12,000}{1,000} = $12.00 \quad \text{Cost of goods available for sale} \quad $12,000
\]

\[
\text{Less: Ending inventory} \quad 5,400
\]

## Step 2: Cost of Goods Sold

<table>
<thead>
<tr>
<th>Units</th>
<th>Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>$12.00</td>
<td>$5,400</td>
</tr>
</tbody>
</table>

Cost of goods sold $6,600
# Financial Statement Effects of Cost Flow Methods

In Period of Rising Prices, **FIFO** Reports:

<table>
<thead>
<tr>
<th></th>
<th><strong>FIFO</strong></th>
<th><strong>Average</strong></th>
<th><strong>LIFO</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>$18,500</td>
<td>$18,500</td>
<td>$18,500</td>
</tr>
<tr>
<td><strong>Cost of goods sold</strong></td>
<td>6,200</td>
<td>6,600</td>
<td>7,000</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>12,300</td>
<td>11,900</td>
<td>11,500</td>
</tr>
<tr>
<td><strong>Operating expenses</strong></td>
<td>9,000</td>
<td>9,000</td>
<td>9,000</td>
</tr>
<tr>
<td><strong>Income before taxes</strong></td>
<td>3,300</td>
<td>2,900</td>
<td>2,500</td>
</tr>
<tr>
<td><strong>Income tax expense</strong></td>
<td>990</td>
<td>870</td>
<td>750</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td><strong>$2,310</strong></td>
<td><strong>$2,030</strong></td>
<td><strong>$1,750</strong></td>
</tr>
<tr>
<td><strong>Inventory balance</strong></td>
<td><strong>$5,800</strong></td>
<td><strong>$5,400</strong></td>
<td><strong>$5,000</strong></td>
</tr>
</tbody>
</table>
## Financial Statement Effects of Cost Flow Methods

In Period of Rising Prices, **LIFO** Reports:

<table>
<thead>
<tr>
<th></th>
<th>FIFO</th>
<th>Average</th>
<th>LIFO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>$18,500</td>
<td>$18,500</td>
<td>$18,500</td>
</tr>
<tr>
<td><strong>Cost of goods sold</strong></td>
<td>6,200</td>
<td>6,600</td>
<td>7,000</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>12,300</td>
<td>11,900</td>
<td>11,500</td>
</tr>
<tr>
<td><strong>Operating expenses</strong></td>
<td>9,000</td>
<td>9,000</td>
<td>9,000</td>
</tr>
<tr>
<td><strong>Income before taxes</strong></td>
<td>3,300</td>
<td>2,900</td>
<td>2,500</td>
</tr>
<tr>
<td><strong>Income tax expense</strong></td>
<td>990</td>
<td>870</td>
<td>750</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>$2,310</td>
<td>$2,030</td>
<td>$1,750</td>
</tr>
<tr>
<td><strong>Inventory balance</strong></td>
<td>$5,800</td>
<td>$5,400</td>
<td>$5,000</td>
</tr>
</tbody>
</table>
# Analysis of Inventory

**Illustration: Wal-Mart data:**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ending inventory</td>
<td>$36,318</td>
<td>$32,713</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>315,287</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Wal-Mart 2011</th>
<th>Target 2011</th>
<th>Industry Average 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory turnover</td>
<td>$315,287</td>
<td>9.1 times</td>
<td>8.4 times</td>
</tr>
<tr>
<td></td>
<td>($36,318 + $32,713)/2 = 9.1 times</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Days in inventory</td>
<td>365 days</td>
<td>40.1 days</td>
<td>43.5 days</td>
</tr>
<tr>
<td></td>
<td>9.1</td>
<td>58.9 days</td>
<td></td>
</tr>
</tbody>
</table>

\[
\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\left(\frac{\text{Ending inventory}}{2}\right)}
\]
Determining the Cost of Plant Assets

Historical Cost Principle

- Requires that companies record plant assets at cost.

Cost consists of **all expenditures necessary** to acquire an asset and make it ready for its intended use.

**Expense** = costs incurred (such as repairs) related to a plant asset that are expensed immediately.

**Capitalize** = additions and improvements -- costs included in a plant asset account.

- e.g. freight, sales tax, installation
Determining the Cost of Plant Assets

Cost consists of all expenditures necessary to acquire the asset and “make it ready for its intended use”

- Purchase price
- Taxes
- Installation costs
- Shipping costs
Should an engine overhaul (that extends the life of the truck) be capitalized (added to the cost of the truck) or immediately expensed?

**Additions & Improvements**
- expenditures to increase the operating efficiency, productive capacity, or expected useful life of the plant asset
- usually large in $ amount
- occur infrequently during the service life
- examples = engine overhaul and replace the roof of a building
- recorded as additions to the asset account
Capitalized v. Expense

Ordinary Repairs & Maintenance

- expenditures to maintain the operating efficiency and expected productive life of the asset
- usually small in $ amount
- occur throughout the service life
- examples = oil change on vehicles and paint a building
- recorded as expense when incurred

Should an oil change be capitalized (added to the cost of the truck) or immediately expensed?
Review Question

Lenard Company purchases a delivery truck at a cash price of $22,000. Related expenditures are sales taxes $1,320, painting and lettering $500, motor vehicle license $80, and a three-year accident insurance policy $1,600. **Compute the cost** of the delivery truck.

<table>
<thead>
<tr>
<th></th>
<th>Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash price</td>
<td>$22,000</td>
</tr>
<tr>
<td>Sales taxes</td>
<td>1,320</td>
</tr>
<tr>
<td>Painting and lettering</td>
<td>500</td>
</tr>
<tr>
<td><strong>Cost of Delivery Truck</strong></td>
<td><strong>$23,820</strong></td>
</tr>
</tbody>
</table>
Depreciation of Plant Assets

The process of **allocating** the cost of a plant asset to expense over its useful life in a rational and systematic manner.

Depreciation is a method of cost **allocation**, **not** a process of asset valuation.

Methods of depreciation include:

- Straight Line
- Units of Activity
- Double Declining Balance
3 Factors to Compute Depreciation

**Cost:** all expenditures necessary to acquire the asset and make it ready for intended use

**Useful life:** estimate of the expected life based on need for repair, service life, and vulnerability to obsolescence

**Salvage value:** estimate of the asset's value at the end of its useful life
Depreciation Methods


<table>
<thead>
<tr>
<th>Cost</th>
<th>$13,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected salvage value</td>
<td>$1,000</td>
</tr>
<tr>
<td>Estimated useful life in years</td>
<td>5</td>
</tr>
<tr>
<td>Estimated useful life in miles</td>
<td>100,000</td>
</tr>
</tbody>
</table>

Required: Compute depreciation using the following:
(a) Straight-Line  (b) Units-of-Activity
### Straight-Line Method

<table>
<thead>
<tr>
<th>Cost</th>
<th>−</th>
<th>Salvage Value</th>
<th>=</th>
<th>Depreciable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$13,000</td>
<td>−</td>
<td>$1,000</td>
<td>=</td>
<td>$12,000</td>
</tr>
</tbody>
</table>

Depreciable Cost $12,000 \div \text{Useful Life (in years)} = \text{Depreciation Expense}$

\[ \frac{$12,000}{5} = $2,400 \]

- Depreciation expense 2,400
- Accumulated depreciation 2,400
Units-of-Activity Method

- Estimate total units of activity to calculate depreciation cost per unit.
- Expense varies based on units of activity.

<table>
<thead>
<tr>
<th>Depreciable Cost</th>
<th>Total Units of Activity</th>
<th>Depreciation Cost per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$12,000</td>
<td>100,000 miles</td>
<td>$0.12</td>
</tr>
</tbody>
</table>

\[
\text{Depreciation Cost per Unit} = \frac{\text{Depreciable Cost}}{\text{Total Units of Activity}}
\]

\[
\text{Depreciation Expense} = \text{Depreciation Cost per Unit} \times \text{Units of Activity during the Year}
\]

\[
\text{Depreciation Expense} = \$0.12 \times 15,000 \text{ miles} = \$1,800
\]
## Comparison of Depreciation Methods

Each method is acceptable because each recognizes the decline in service potential of the asset in a rational and systematic manner.

<table>
<thead>
<tr>
<th>Year</th>
<th>Straight-Line</th>
<th>Declining-Balance</th>
<th>Units-of-Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$2,400</td>
<td>$5,200</td>
<td>$1,800</td>
</tr>
<tr>
<td>2013</td>
<td>2,400</td>
<td>3,120</td>
<td>3,600</td>
</tr>
<tr>
<td>2014</td>
<td>2,400</td>
<td>1,872</td>
<td>2,400</td>
</tr>
<tr>
<td>2015</td>
<td>2,400</td>
<td>1,123</td>
<td>3,000</td>
</tr>
<tr>
<td>2016</td>
<td>2,400</td>
<td>685</td>
<td>1,200</td>
</tr>
</tbody>
</table>

**Total**
- $12,000
- $12,000
- $12,000

---

**Depreciation Expense**

- **2012**: $5,000
- **2013**: $4,000
- **2014**: $3,000
- **2015**: $2,000
- **2016**: $1,000

**Key:**
- **Straight-line**
- **Declining-balance**
- **Units-of-activity**

**Year**
- 2012
- 2013
- 2014
- 2015
- 2016
In the sale of a fixed asset, the net book value (NBV) of the asset is compared with the cash proceeds received from the sale.

If the cash proceeds exceed the NBV, a gain on disposal occurs.

If cash proceeds from the sale are less than the NBV, a loss on disposal occurs.
Sale of Plant Assets

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of equipment</td>
<td>$60,000</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td>(49,000)</td>
</tr>
<tr>
<td><strong>NBV</strong></td>
<td>11,000</td>
</tr>
<tr>
<td>Cash proceeds from sale</td>
<td>16,000</td>
</tr>
<tr>
<td><strong>Gain on disposal</strong></td>
<td>$5,000</td>
</tr>
</tbody>
</table>

Cash

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>16,000</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td>49,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>60,000</td>
</tr>
<tr>
<td><strong>Gain on disposal</strong></td>
<td>5,000</td>
</tr>
</tbody>
</table>

If instead the cash proceeds were only $9,000 [less than the NBV], there would have been a $2,000 **Loss**. *(Loss on disposal would be debited.)*
Intangible Assets

✓ Intangible assets (such as patents) are amortized if they have a finite life.

✓ What do depreciation expense and amortization expense have in common?

✓ Goodwill arises only when purchased

✓ Is goodwill amortized?
Bond Characteristics

✓ As a way to borrow, **bonds** are issued by corporations, universities, and governmental agencies.

✓ A bond certificate is issued to the investor to provide evidence of the investor’s claim against the company.

✓ The person who buys the bonds (the bondholder) is **investing** in bonds. Investors can purchase bonds in small denominations ($1,000 or multiples of $1,000).
# Bond Interest Rates

<table>
<thead>
<tr>
<th>Contract rate</th>
<th>Market rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>(Stated rate)</em></td>
<td><em>(Effective rate)</em></td>
</tr>
<tr>
<td>the rate specified on the bond certificate, used to determine the actual interest payment</td>
<td>the rate that creditors (investors) could obtain by investing in other bonds similar to the issuing firm’s bonds</td>
</tr>
</tbody>
</table>

“What an investor gets”

“What an investor wants”
BOND PAYABLE: Issue at Face Value, Discount, or Premium?

- Bond Contractual Interest Rate: 10%
- Market Interest Rate:
  - 8% → Premium
  - 10% → Face Value
  - 12% → Discount

Issued when
Illustration: On January 1, 2014, Candlestick Inc. issues $100,000, five-year, 10% bonds at 98 (98% of face value):

<table>
<thead>
<tr>
<th>Date</th>
<th>Account Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1</td>
<td>Cash</td>
<td>98,000</td>
</tr>
<tr>
<td></td>
<td>Discount on bonds payable</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>Bonds payable</td>
<td>100,000</td>
</tr>
</tbody>
</table>

CANDLESTICK INC.
Balance Sheet (partial)

<table>
<thead>
<tr>
<th>Long-term liabilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds payable</td>
<td>$100,000</td>
</tr>
<tr>
<td>Less: Discount on bonds payable</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>$98,000</td>
</tr>
</tbody>
</table>
Illustration: Candlestick Inc. bonds previously described are issued at 102 (rather than at 98):

Jan. 1  Cash  102,000
   Bonds payable  100,000
   Premium on bonds payable  2,000

CANDLESTICK INC.
Balance Sheet (partial)

<table>
<thead>
<tr>
<th>Long-term liabilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds payable</td>
<td>$100,000</td>
</tr>
<tr>
<td>Add: Premium on bonds payable</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>$102,000</td>
</tr>
</tbody>
</table>
In addition to the 2 basic “building blocks” (Common Stock and Retained Earnings), equity also may include Preferred Stock, APIC, and Treasury Stock.

```
<table>
<thead>
<tr>
<th>Stockholders’ equity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid-in capital</td>
<td></td>
</tr>
<tr>
<td>Capital stock</td>
<td></td>
</tr>
<tr>
<td>9% preferred stock, $100 par value, cumulative, 10,000 shares authorized, 6,000 shares issued and outstanding</td>
<td>$ 600,000</td>
</tr>
<tr>
<td>Common stock, no par, $5 stated value, 500,000 shares authorized, 400,000 shares issued, and 390,000 outstanding</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Total capital stock</td>
<td>2,600,000</td>
</tr>
<tr>
<td>Additional paid-in capital</td>
<td></td>
</tr>
<tr>
<td>In excess of par value—preferred stock</td>
<td>$ 30,000</td>
</tr>
<tr>
<td>In excess of stated value—common stock</td>
<td>1,050,000</td>
</tr>
<tr>
<td>Total additional paid-in capital</td>
<td>1,080,000</td>
</tr>
<tr>
<td>Total paid-in capital</td>
<td>3,680,000</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>1,160,000</td>
</tr>
<tr>
<td>Total paid-in capital and retained earnings</td>
<td>4,840,000</td>
</tr>
<tr>
<td>Less: Treasury stock—common (10,000 shares)</td>
<td>(80,000)</td>
</tr>
<tr>
<td>Total stockholders’ equity</td>
<td>$4,760,000</td>
</tr>
</tbody>
</table>
```
Issuing **preferred stock** is another way for a company to raise capital (in addition to issuing *common* stock, or debt).

E.g., a company could issue 5%, $100 par value **preferred stock**. [This means that, if declared by the Board, a preferred dividend of $5 will be paid.]

Preferred stock is ‘preferred’ in 2 respects:

- **Dividend** preference: All preferred dividends must be paid before the common shareholders get a dime.

- **Liquidation** preference: If a liquidation of assets should occur (e.g., because of bankruptcy), the preferred shareholders “stand before” the common shareholders (but after creditors) to receive distributions (from sales of assets).
Illustration  Assume Hydro-Slide, Inc. issues 1,000 shares of $1 par value common stock for cash at $5 per share.

<table>
<thead>
<tr>
<th>Cash</th>
<th>5,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common stock (1,000 x $1)</td>
<td>1,000</td>
</tr>
<tr>
<td>“APIC” Paid-in capital in excess of par value</td>
<td>4,000</td>
</tr>
</tbody>
</table>

Par value = “Legal capital” to protect corporate creditors
**Treasury Stock**

- Treasury stock is a corporation’s own stock that it has **reacquired** from shareholders, but not retired (so it’s still **issued**, but no longer **outstanding**).

- Treasury stock **reduces** stockholders’ equity.

**Example:** Garden Inc acquires 4,000 shares of its stock at $8 per share.

<table>
<thead>
<tr>
<th>Treasury Stock (4,000 x $8)</th>
<th>32,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>32,000</td>
</tr>
</tbody>
</table>
Illustration: On Dec 1, the directors of Grant Corp declare a 50¢ per share cash dividend on 100,000 shares of common stock. The dividend is payable on Jan 20 to shareholders of record on Dec 22:

**December 1 (Declaration Date)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividends</td>
<td>50,000</td>
</tr>
<tr>
<td>Dividends payable</td>
<td>50,000</td>
</tr>
</tbody>
</table>

**December 22 (Date of Record)**

No entry

**January 20 (Payment Date)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividends payable</td>
<td>50,000</td>
</tr>
<tr>
<td>Cash</td>
<td>50,000</td>
</tr>
</tbody>
</table>
End of AQE Review

Financial Accounting

Fall 2016

("NIU Business at Barsema Hal, ILicensed under a Creative Commons Attribution - Non-Commercial 2.0 Generic, accessed August 21, 2016 athttps://www.flickr.com/photos/niucollegeofbusiness/20416724783")
1. Jimmy's Repair Shop started the year with total assets of $150,000 and total liabilities of $120,000. During the year the business recorded revenues of $315,000, expenses of $165,000, and paid dividends of $30,000. What was the **net income** reported by Jimmy's Repair Shop for the year?

a. $120,000.
b. $150,000.
c. $90,000.
d. $285,000.

2. **Retained earnings** at the end of the period is equal to

a. Retained earnings at the beginning of the period plus net income minus liabilities.
b. Retained earnings at the beginning of the period plus net income minus dividends.
c. Net income.
d. Assets plus liabilities.

3. Sound Services Company had the following accounts and balances:

- Accounts payable: $12,000
- Equipment: $14,000
- Accounts receivable: $2,000
- Land: $14,000
- Buildings: ?
- Unearned Service Revenue: $4,000
- Cash: $6,000
- Total Stockholders' Equity: $38,000

What would be the balance of the Buildings account?

a. $14,000
b. $54,000
c. $58,000
d. $18,000

4. Northern Shoe Company reported the following items on its **cash flow statement** for the current year:

- Net cash provided by operating activities: $70,000
- Net cash used by investing activities: $(20,000)
- Net cash used by financing activities: $(40,000)
- Beginning cash balance: $30,000

What was Northern Shoe Company's cash balance at the end of the year?

a. $10,000
b. $30,000
c. $40,000
d. $110,000

5. For the year, Hawk Company had net income of $80 million, preferred dividends of $5 million, and 150 million average common shares outstanding. What is Hawk's **EPS** (earnings per share)?

a. $0.50 per share
b. $0.53 per share
c. $2.00 per share
d. $1.88 per share
6. In order for accounting information to be **relevant**, it must
   a. have very little cost.
   b. help predict future events or confirm prior expectations.
   c. not be reported to the public.
   d. be both biased and immaterial.

7. The Polar Bear Ice Cream Company had current assets of $180 million and current liabilities of $60 million. What is Polar Bear’s **current ratio**?
   a. 4:1 (4 to 1)
   b. 1:3 (1 to 3)
   c. 3:1 (3 to 1)
   d. need more information to determine

8. A company’s **current ratio** can best be described as a measure of
   a. profitability.
   b. liquidity.
   c. solvency.
   d. the company’s percentage share of the market in their industry.

9. Which accounting assumption assumes that an enterprise will continue in operation long enough to carry out its existing objectives and commitments?
   a. Monetary unit assumption
   b. Economic entity assumption
   c. Periodicity assumption
   d. Going concern assumption

10. A **revenue** account
    a. is increased by debits.
    b. is decreased by credits.
    c. has a normal balance of a debit.
    d. is increased by credits.

11. Which of the following statements is true?
    a. Debits increase assets and increase liabilities.
    b. Credits decrease assets and decrease liabilities.
    c. Credits decrease assets and increase liabilities.
    d. Debits increase liabilities and decrease assets.

12. An accountant has debited an asset account for $800 and credited a liability account for $600. Which of the following would be an **incorrect** way to complete the recording of this transaction?
    a. Credit an asset account for $200.
    b. Credit another liability account for $200.
    c. Credit a stockholders’ equity account for $200.
    d. Debit a stockholders’ equity account for $200.

13. In the first month of operations, the total of the debit entries to the Cash account amounted to $1,200 and the total of the credit entries to the Cash account amounted to $800. The Cash account has
    a. an $800 credit balance.
    b. a $400 debit balance.
    c. a $1,200 debit balance.
    d. a $400 credit balance.
14. Which of the following statements about the **accrual basis** of accounting is false?
   a. Events that change a company’s financial statements are recorded in the periods in which the events occur.
   b. Revenue is recognized in the period in which it is earned.
   c. The accrual basis of accounting is in accord with generally accepted accounting principles.
   d. Revenue is recorded only when cash is received, and expenses are recorded only when cash is paid.

15. The asset account, Supplies, has a balance of $1,000 on January 1, 2016. During January, $18,000 of supplies were purchased. A count of supplies at the end of the month indicates a balance of $900. What **adjusting entry** is necessary at January 31?
   a. Debit Supplies Expense $18,900 and credit Supplies for $18,900
   b. Debit Supplies Expense $900 and credit Supplies for $900
   c. Debit Supplies Expense $18,100 and credit Supplies for $18,100
   d. Debit Supplies $18,000 and credit Supplies Expense for $18,000

16. The balance in the Prepaid Rent account before adjustment at the end of the year is $12,000 and represents three months’ rent paid on December 1. The **adjusting entry** required on December 31 is:
   a. Debit Prepaid Rent $4,000; credit Rent Expense $4,000.
   b. Debit Prepaid Rent $8,000; credit Rent Expense $8,000.
   c. Debit Rent Expense $12,000; credit Prepaid Rent $12,000.
   d. Debit Rent Expense $4,000; credit Prepaid Rent $4,000.

17. Green Realty Company received a check for $24,000 on July 1 which represents a 6-month advance payment of rent on a building it rents to a client. Unearned Rent was credited for the full $24,000. Financial statements will be prepared on July 31. Green Realty should make the following **adjusting entry** on July 31:
   a. Debit Unearned Rent, $4,000; credit Rental Revenue, $4,000.
   b. Debit Rental Revenue, $4,000; credit Unearned Rent, $4,000.
   c. Debit Unearned Rent, $24,000; credit Rental Revenue, $24,000.
   d. Debit Cash $24,000; credit Rental Revenue, $24,000.

18. Raxon Company borrowed $48,000 from the bank signing a 6%, 3-month note on September 1. Principal and interest are payable to the bank on December 1. If the company prepares monthly financial statements, the **adjusting entry** that the company should make for interest on September 30, would be:
   a. Debit Interest Expense $240; credit Interest Payable $240.
   b. Debit Interest Expense $480; credit Interest Payable $480.
   c. Debit Note Payable $480; credit Cash $480.
   d. Debit Cash $240; credit Interest Payable $240.

19. Mary Richardo has performed CPA services for a client but has not billed the client as of the end of the accounting period. What **adjusting entry** must Mary make?
   a. Debit Cash and credit Unearned Revenue
   b. Debit Accounts Receivable and credit Unearned Revenue
   c. Debit Accounts Receivable and credit Service Revenue
   d. Debit Cash and credit Service Revenue

20. Which of the following is a true statement about **inventory systems**?
   a. Periodic inventory systems require more detailed inventory records.
   b. Perpetual inventory systems require more detailed inventory records.
   c. A periodic system requires cost of goods sold be determined after each sale.
   d. A perpetual system determines cost of goods sold only at the end of the accounting period.
21. Which statement is incorrect?
   a. Periodic inventory systems provide better control over inventories than perpetual inventory systems.
   b. Computers and electronic scanners allow more companies to use a perpetual inventory system.
   c. Freight-in is debited to merchandise inventory when a perpetual inventory system is used.
   d. Regardless of the inventory system that is used, companies should take a physical inventory count.

22. A purchase of $1,200 is made on March 2, terms 2/10, n/30, on which a return of $200 is granted on March 5. What amount should be paid on March 12?
   a. $1,176
   b. $1,200
   c. $1,000
   d. $980

23. If net sales are $400,000, cost of goods sold is $310,000, and the operating expenses are $60,000, what is the gross profit?
   a. $30,000
   b. $90,000
   c. $340,000
   d. $400,000

24. Financial information is presented below:
   - Operating Expenses: $35,000
   - Sales Returns and Allowances: 12,000
   - Sales Discounts: 3,000
   - Sales Revenue: 140,000
   - Cost of Goods Sold: 80,000

   Calculate the amount of net sales.
   a. $128,000
   b. $125,000
   c. $140,000
   d. $137,000

25. Financial information is presented below:
   - Purchases: $90,000
   - Beginning Inventory: 23,000
   - Ending Inventory: 17,000
   - Purchase Returns and Allowances: 3,000
   - Purchase Discounts: 7,000
   - Freight In: 4,000

   Calculate the cost of goods purchased.
   a. $84,000
   b. $90,000
   c. $103,000
   d. $117,000
26. Financial information is presented below:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchases</td>
<td>$90,000</td>
</tr>
<tr>
<td>Beginning Inventory</td>
<td>23,000</td>
</tr>
<tr>
<td>Ending Inventory</td>
<td>17,000</td>
</tr>
<tr>
<td>Purchase Returns and Allowances</td>
<td>3,000</td>
</tr>
<tr>
<td>Purchase Discounts</td>
<td>7,000</td>
</tr>
<tr>
<td>Freight In</td>
<td>4,000</td>
</tr>
</tbody>
</table>

Calculate the **cost of goods sold**.

a. $ 84,000  
b. $ 90,000  
c. $103,000  
d. $117,000

27. Noise Makers Inc. has the following inventory data:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
<td>Beginning inventory 20 units at $19 $380</td>
</tr>
<tr>
<td>7</td>
<td>Purchases 70 units at $20 1,400</td>
</tr>
<tr>
<td>22</td>
<td>Purchases 10 units at $22 220</td>
</tr>
<tr>
<td></td>
<td>$2,000</td>
</tr>
</tbody>
</table>

A physical count of merchandise inventory on July 30 reveals that there are 40 units on hand. Using the **weighted-average** cost method, the amount allocated to **ending inventory** is

a. $780.  
b. $800.  
c. $813.  
d. $820.

28. Noise Makers Inc. has the following inventory data:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
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<td>22</td>
<td>Purchases 10 units at $22 220</td>
</tr>
<tr>
<td></td>
<td>$2,000</td>
</tr>
</tbody>
</table>

A physical count of merchandise inventory on July 30 reveals that there are 40 units on hand. Using the **weighted-average** cost method, the amount allocated to **cost of goods sold** is

a. $ 780.  
b. $ 800.  
c. $1,200.  
d. $1,180.

29. Noise Makers Inc. has the following inventory data:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
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<td>22</td>
<td>Purchases 10 units at $22 220</td>
</tr>
<tr>
<td></td>
<td>$2,000</td>
</tr>
</tbody>
</table>

A physical count of merchandise inventory on July 30 reveals that there are 40 units on hand. Using the **FIFO** inventory method, the amount allocated to **ending inventory** is

a. $780.  
b. $820.  
c. $800.  
d. $760.
30. Noise Makers Inc. has the following inventory data:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td></td>
<td>Beginning inventory</td>
<td>20 units at $19</td>
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<td>Purchases</td>
<td>70 units at $20</td>
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<td>22</td>
<td>Purchases</td>
<td>10 units at $22</td>
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<td>$2,000</td>
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</tbody>
</table>

A physical count of merchandise inventory on July 30 reveals that there are 40 units on hand. Using the **FIFO** inventory method, the amount allocated to **cost of goods sold** is

- a. $780.
- b. $820.
- c. $1,180.
- d. $1,220

31. Noise Makers Inc. has the following inventory data:

<p>| | | | |</p>
<table>
<thead>
<tr>
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<tr>
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<td>22</td>
<td>Purchases</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$2,000</td>
</tr>
</tbody>
</table>

A physical count of merchandise inventory on July 30 reveals that there are 40 units on hand. Using the **LIFO** inventory method, the amount allocated to **ending inventory** is

- a. $780.
- b. $800.
- c. $813.
- d. $760.

32. Noise Makers Inc. has the following inventory data:

<p>| | | | |</p>
<table>
<thead>
<tr>
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A physical count of merchandise inventory on July 30 reveals that there are 40 units on hand. Using the **LIFO** inventory method, the amount allocated to **cost of goods sold** is

- a. $780.
- b. $820.
- c. $1,180.
- d. $1,220.

33. Which inventory cost flow method produces the **highest** net income in a period of rising prices?

- a. Weighted-average cost
- b. LIFO
- c. FIFO
- d. Not applicable – an inventory cost method affects only the balance sheet

34. Which inventory cost flow method produces the **lowest** income taxes in a period of rising prices?

- a. Weighted-average cost
- b. LIFO
- c. FIFO
- d. Not applicable – an inventory cost method affects only the balance sheet
35. Which inventory costing method produces an approximation of replacement cost on the balance sheet?
   a. Weighted-average cost  
   b. LIFO  
   c. FIFO  
   d. All inventory costing methods produce an approximation of replacement cost on the balance sheet

36. Which of the following would be deducted from the balance per books on a bank reconciliation?
   a. Outstanding checks
   b. Deposits in transit
   c. Notes collected by the bank
   d. Service charges

37. Which of the following would be added to the balance per bank on a bank reconciliation?
   a. Outstanding checks
   b. Deposits in transit
   c. Notes collected by the bank
   d. Service charges

38. Higgins Company gathered the following reconciling information in preparing its October bank reconciliation:
   Cash balance per books @ 10/31 (unadjusted) $ 8,400
   Deposits in transit
   Note receivable collected by the bank 1,700
   Bank charge for check printing 40
   Outstanding checks 4,000
   NSF check 340
   The **adjusted cash balance per books** on October 31 is:
   a. $9,420.
   b. $8,020.
   c. $5,720.
   d. $9,720.

39. For the year, Big Brown Bear (BBB) Corp had net sales of $420 million, cost of goods sold of $300 million, and an average inventory balance of $15 million. What is BBB’s **inventory turnover**?
   a. 20 times
   b. 28 times
   c. 8 times
   d. 48 times

40. Green Corp. has a $500,000 balance in Accounts Receivable. Estimated uncollectible accounts are 5% of Accounts Receivable. If the balance in the Allowance for Doubtful Accounts is an $8,000 debit before adjustment, what is the amount of **bad debts expense** recorded in the adjusting entry?
   a. $25,000
   b. $8,000
   c. $33,000
   d. $17,000
41. Nichols Company uses the percentage of receivable method for recording bad debts expense. The accounts receivable balance is $200,000 and credit sales are $1,500,000. Management estimates that 5% of accounts receivable will be uncollectible. What adjusting entry will Nichols Company make if the Allowance for Doubtful Accounts has a credit balance of $2,000 before adjustment?
   a. Debit Bad Debts Expense $10,000; credit Allowance for Doubtful Accounts $10,000.
   b. Debit Bad Debts Expense $8,000; credit Allowance for Doubtful Accounts $8,000.
   c. Debit Bad Debts Expense $8,000; credit Accounts Receivable $8,000.
   d. Debit Bad Debts Expense $10,000; credit Accounts Receivable $10,000.

42. At the end of 2015, Lynch Company has accounts receivable of $700,000 and an allowance for doubtful accounts of $25,000. On January 24, 2016, it is learned that the company’s receivable from Barnes Inc. is not collectible and therefore management authorizes a write-off of $4,300. What entry will Lynch Company make to record the write-off?
   a. Debit Allowance for Doubtful Accounts $4,300 and credit Bad Debts Expense $4,300.
   b. Debit Bad Debts Expense $4,300 and credit Accounts Receivable $4,300.
   c. Debit Bad Debts Expense $4,300 and credit Allowance for Doubtful Accounts $4,300.
   d. Debit Allowance for Doubtful Accounts $4,300 and credit Accounts Receivable $4,300.

43. Which of the following would not be included in the Equipment account?
   a. Installation costs
   b. Insurance during transit
   c. Sales tax
   d. Electricity used by the machine during normal operation

44. The depreciation method that results in an equal amount of depreciation expense in each year of service is
   a. Straight-line.
   b. Units-of-activity.
   d. None of these.

45. Zip-Fast Airline leases 15 jets that are accounted for as operating leases. Because of this accounting, the striking result on Zip-Fast’s financial statements is that
   a. passenger revenue from flying the jets is never recorded on the income statement.
   b. the liability (for the lease commitment/obligation) is never recorded on the balance sheet.
   c. the cash outflow for the lease payments is never recorded on the cash flow statement.
   d. Zip-Fast’s fuel expense is never recorded on the income statement.

46. Equipment with a cost of $150,000 has an estimated salvage value of $10,000 and an estimated life of 4 years. It is to be depreciated by the straight-line method. What is the amount of depreciation for the first full year?
   a. $37,500
   b. $35,000
   c. $37,800
   d. $36,250

47. Equipment with a cost of $320,000 has an estimated salvage value of $20,000 and an estimated life of 4 years or 15,000 hours. It is to be depreciated using the units-of-activity method. What is the amount of depreciation for the first full year during which the machine was used 3,300 hours?
   a. $80,000
   b. $90,400
   c. $66,000
   d. $75,000
48. Many GAAP-following public companies (such as Starbucks and Microsoft) have **goodwill** on their balance sheet. Which of the following statements regarding goodwill is **incorrect**?
   a. Goodwill is an intangible asset.
   b. Goodwill should be amortized (expensed) on a straight-line basis over 20 years.
   c. Goodwill is recorded only when a company acquires another company/business.
   d. Goodwill must be written down if it's determined its value has been impaired.

49. A plant asset with a cost of $180,000 and accumulated depreciation of $171,000 is sold for $21,000. What is the amount of **gain or loss on disposal** of the plant asset?
   a. $21,000 loss
   b. $12,000 loss
   c. $12,000 gain
   d. $21,000 gain

50. Gomez Corporation issues 800, 10-year, 8%, $1,000 bonds at 96. The journal entry to record the issuance will show a
   a. debit to Cash of $800,000.
   b. credit to Discount on Bonds Payable for $32,000.
   c. credit to Bonds Payable for $768,000.
   d. debit to Cash for $768,000.

51. Molina Corporation issues 3,000, 10-year, 8%, $1,000 bonds at 103. The journal entry to record the issuance will show a
   a. debit to Cash of $3,000,000.
   b. debit to Premium on Bonds Payable for $90,000.
   c. credit to Bonds Payable for $3,000,000.
   d. credit to Cash for $3,090,000.

52. Penguin Corp has a **debt-to-assets** ratio of 95%. Which of the following is **incorrect**?
   a. Penguin's stockholders would prefer a lower debt-to-assets ratio.
   b. Penguin's 80% ratio means that for each dollar of debt, there is 95 cents of assets.
   c. Penguin's 80% ratio means that for each dollar of assets, 95 cents was financed by debt.
   d. Penguin's financial statement users evaluate the company's debt-to-assets ratio as a measure of solvency.

53. On the balance sheet, the account **Discount on Bonds Payable** is
   a. added to bonds payable.
   b. deducted from bonds payable.
   c. classified as a stockholder's equity account.
   d. classified as an expense account.

54. Over several years, Huskie Corp made the following expenditures related to the building it owns (an older building which houses both Huskie's manufacturing operations and its offices). Which would most likely be **expensed** in the period incurred? (i.e., the other 3 choices would likely be capitalized.)
   a. $2,000 to power-wash the exterior
   b. $60,000 to re-roof the entire building
   c. $75,000 to replace all electrical wiring and plumbing
   d. $40,000 to build an addition to the office space
55. A **contingent liability** (and related loss) for a lawsuit against a company should be recorded
   a. only when a final court decision has been made.
   b. when the company determines it is probable a liability exists, and the liability can be
      estimated.
   c. for the maximum loss possible, even if the company believes the lawsuit is frivolous.
   d. when the plaintiff publicly announces to the media that they believe they have a strong case.

56. If Noreen Company issues 2,000 shares of $5 par value common stock for $140,000, the account
   a. Common Stock will be credited for $140,000.
   b. Paid-in Capital in Excess of Par Value will be credited for $10,000.
   c. Paid-in Capital in Excess of Par Value will be credited for $130,000.
   d. Cash will be debited for $130,000.

57. If Pratt Corporation issues 3,000 shares of $5 par value preferred stock for $70 per share, the
    journal entry to record the issuance will include a
    a. credit to Preferred Stock for $195,000.
    b. credit to Paid-in Capital in Excess of Par Value for $210,000.
    c. credit to Paid-in Capital in Excess of Par Value for $225,000.
    d. debit to Cash for $210,000.

58. The net effect on the corporation of the declaration and payment of a **cash dividend** is to
   a. decrease liabilities and decrease stockholders’ equity.
   b. increase stockholders’ equity and decrease liabilities.
   c. decrease assets and decrease stockholder’s equity.
   d. increase assets and increase stockholders’ equity.

59. Nance Corporation’s balance sheet showed the following:

   Preferred stock  $  200,000
   Common stock     13,000,000
   Paid-in Capital in excess of par value-preferred stock  40,000
   Paid-in Capital in excess of par value-common stock   18,000,000
   Retained earnings  5,100,000
   Treasury stock     420,000

   Nance’s total **paid-in capital** was
   a. $31,240,000.
   b. $31,660,000.
   c. $30,820,000.
   d. $18,040,000.

60. Nance Corporation’s balance sheet showed the following:

   Preferred stock  $  200,000
   Common stock     13,000,000
   Paid-in Capital in excess of par value-preferred stock  40,000
   Paid-in Capital in excess of par value-common stock   18,000,000
   Retained earnings  5,100,000
   Treasury stock     420,000

   Nance’s total **stockholders’ equity** was
   a. $36,760,000.
   b. $31,240,000.
   c. $36,340,000.
   d. $35,920,000.
1. B $315,000 – $165,000 = $150,000
2. B
3. D $2,000 + X + $6,000 + $14,000 + $14,000 = $12,000 + $4,000 + $38,000. X= $18,000
4. C $70,000 – $20,000 - $40,000 + $30,000 = $40,000
5. A ($80-$5)/150
6. B
7. C $180/$60
8. B
9. D
10. D
11. C
12. D
13. B
14. D
15. C $1,000 + $18,000 – $900 = $18,100
16. D $12,000/3 = $4,000
17. A $24,000/6 = $4,000
18. A ($48,000 X 6%) x 1/12 = $240
19. C
20. B
21. A
22. D ($1,200 – $200) x 2% = $20 discount. $1,000 – $20 = $980
23. B $400,000 – $310,000 = $90,000
24. B $140,000 – $12,000 – $3,000 = $125,000
25. A $90,000 – $3,000 - $7,000 + $4,000 = $84,000
26. B $23,000 + $84,000 (from prior question) - $17,000 = $90,000
27. B ($2,000/100) x 40 = $800
28. C $2,000 – $800 (from prior question) = $1,200
29. B (10 x $22) + (30 x $20) = $820
30. C $2,000 – $820 (from prior question) = $1,180
31. A (20 x $19) + (20 x $20) = $780
32. D $2,000 – $780 (from prior question) = $1,220
33. C
34. B
35. C
36. D
37. B
38. D $8,400 + $1,700 - $40 – $340 = $9,720
39. A $300/$15 = 20
40. C $500,000 x 5% = $25,000 + $8,000 = $33,000
41. B $200,000 X 5% = $10,000 – $2,000 = $8,000
42. D
43. D
44. A
45. B
Continued on next page
46.  B  ($150,000 – $10,000)/4 = $35,000
47.  C  ($320,000 – $20,000)/150,000 = $20 x 3,300 = $66,000
48.  B
49.  C  $21,000 - ($180,000 – $171,000) = $12,000
50.  D  800 x $1,000 = $800,000 x 96% = $768,000
51.  C  3,000 x $1,000 = $3,000,000
52.  B
53.  B
54.  A
55.  B
56.  C  $140,000 - (2,000 x $5) = $130,000
57.  D  3,000 x $70 = $210,000
58.  C
59.  A  $200,000 + $13,000,000 + $40,000 + $18,000,000 = $31,240,000
60.  D  $31,240,000 (from prior question) + $5,100,000 – $420,000 = $35,920,000
1. An **income statement**
   a. Summarizes the changes in retained earnings for a specific period of time.
   b. Reports the changes in assets, liabilities and stockholders’ equity over a period of time.
   c. Reports the in assets, liabilities and stockholders’ equity at a specific date.
   d. Presents the revenues and expenses for a specific period of time.

2. Which of the following statements is true?
   a. Amounts received from issuing stock are revenues.
   b. Amounts paid out as dividends are not expenses.
   c. Amounts paid out as dividends are reported on the income statement.
   d. Amounts received from issued stock are reported on the income statement.

3. Henson Company began the year with retained earnings of $350,000. During the year, the company recorded revenues of $500,000, total expenses of $380,000, and paid dividends of $40,000. What was Henson’s **retained earnings** at the end of the year?
   a. $510,000
   b. $430,000
   c. $810,000
   d. $470,000

4. Hepp Company had the following accounts and balances:
   - Revenues $280,000
   - Common stock $ 60,000
   - Equipment 80,000
   - Expenses 250,000
   - Cash 70,000
   - Dividends 20,000
   - Supplies 10,000
   - Accounts payable 40,000
   - Inventory 30,000
   - Retained earnings 160,000

   Hepp’s **total assets** are:
   a. $470,000
   b. $340,000
   c. $160,000
   d. $190,000

5. Jones Jewelry Company has asked you to prepare a Statement of Cash Flows for the first year of its operations. The company reported the following cash flows for the year:
   - Net cash provided by operating activities $ 33,000
   - Net cash used by investing activities (13,500)
   - Net cash provided by financing activities 30,000

   What was **net change in cash** for the year?
   a. $49,500 net increase in cash
   b. $49,500 net decrease in cash
   c. $76,500 net increase in cash
   d. Cannot be determined.

6. In recording an accounting transaction in a **double-entry system**
   a. the number of debit accounts must equal the number of credit accounts.
   b. there must always be entries made on both sides of the accounting equation.
   c. the amount of the debits must equal the amount of the credits.
   d. there must only be two accounts affected by any transaction.
7. **Adjusting entries** are made to ensure that:
   a. expenses are recognized in the period in which they are incurred.
   b. revenues are recorded in the period in which they are earned.
   c. balance sheet and income statement accounts have correct balances at the end of an accounting period.
   d. all of the above.

8. Adjustments for **unearned revenues**:
   a. Decrease liabilities and increase revenues.
   b. Increase liabilities and increase revenues.
   c. Increase assets and increase revenues.
   d. Decrease assets and decrease revenues.

9. The credit terms a vendor offered to a customer were **2/10, n/30**, which means
   a. The customer must pay the bill within 10 days.
   b. The customer can deduct a 2% discount if the bill is paid between the 10th and 30th day from the invoice date.
   c. The customer can deduct a 2% discount if the bill is paid within 10 days of the invoice date.
   d. Two sales returns can be made within 10 days of the invoice date and no returns thereafter.

10. Which of the following expressions is incorrect?
    a. Gross profit – operating expenses = net income
    b. Sales – cost of goods sold – operating expenses = net income
    c. Net income + operating expenses = gross profit
    d. Operating expenses – cost of goods sold = gross profit

11. Which of the following statements is correct with respect to **inventories**?
    a. The FIFO method assumes that the costs of the earliest goods acquired are the last to be sold.
    b. It is generally good business management to sell the most recently acquired goods first.
    c. Under FIFO, the ending inventory is based on the latest units purchased.
    d. FIFO seldom coincides with the actual physical flow of inventory.

12. Which of the following would be added to the balance per books on a **bank reconciliation**?
    a. NSF checks
    b. Deposits in transit
    c. Notes collected by the bank
    d. Service charges

13. Which of the following would be deducted from the balance per bank on a **bank reconciliation**?
    a. Outstanding checks
    b. Deposits in transit
    c. Notes collected by the bank
    d. NSF checks

14. Which of the following statements regarding the **Allowance for Doubtful Accounts** is incorrect?
    a. Its normal balance is a debit.
    b. The balance in the account is an estimate.
    c. When specific customer accounts are written off, the Allowance is reduced.
    d. Accounts Receivable minus the Allowance equals net realizable value.
15. Using the percentage of receivables method for recording bad debts expense, estimated uncollectible accounts are $20,000. If the Allowance for Doubtful Accounts has a $4,000 credit balance before adjustment, what is the amount of bad debts expense that will be recorded in the adjusting entry?
   a. $20,000  
   b. $16,000  
   c. $24,000  
   d. $4,000

16. Equipment with a cost of $150,000 has an estimated salvage value of $10,000 and an estimated life of 4 years. It is to be depreciated by the straight-line method. What is the amount of depreciation for the second full year?
   a. $37,500  
   b. $35,000  
   c. $37,800  
   d. $36,250

17. If the market rate of interest is greater than the contractual rate of interest, bonds will sell
   a. at a premium.  
   b. at face value.  
   c. at a discount.  
   d. only after the stated rate of interest is increased.

18. On the balance sheet, the account Premium on Bonds Payable is
   a. added to bonds payable.  
   b. deducted from bonds payable.  
   c. classified as a stockholder’s equity account.  
   d. classified as an expense account.

19. A corporation purchases 10,000 shares of its own $10 par common stock for $25 per share, recording it at cost. What will be the effect on total stockholders’ equity?
   a. Increase by $100,000  
   b. Decrease by $250,000  
   c. Increase by $250,000  
   d. Decrease by $100,000

20. Which of the following is the appropriate journal entry to record the declaration of cash dividends?
   a. Debit Cash Dividends; credit Cash  
   b. Debit Dividends Payable; credit Cash  
   c. Debit Paid-in Capital; credit Dividends Payable  
   d. Debit Cash Dividends; credit Dividends Payable
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<td>2</td>
<td>B</td>
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<td>3</td>
<td>B</td>
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<td>$350,000 + $500,000 - $380,000 - $40,000 = $430,000</td>
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<td>D</td>
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<td>$80,000 + $70,000 + $10,000 + $30,000 = $190,000</td>
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<td>5</td>
<td>A</td>
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<td>$33,000 - $13,500 + $30,000 = $49,500</td>
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<td>6</td>
<td>C</td>
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<td>$20,000 - $4,000 = $16,000</td>
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<td>16</td>
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<td>($150,000 - $10,000)/4 = $35,000</td>
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<td>17</td>
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<td>18</td>
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<td>19</td>
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<td>10,000 x $25 = $250,000</td>
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## Differences Between Financial and Managerial Accounting

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<tr>
<th></th>
<th>Financial Accounting</th>
<th>Managerial Accounting</th>
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</thead>
<tbody>
<tr>
<td><strong>1. Users</strong></td>
<td>External persons who make financial decisions</td>
<td>Managers who plan for and control an organization</td>
</tr>
<tr>
<td><strong>2. Time focus</strong></td>
<td>Historical perspective</td>
<td>Future emphasis</td>
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<tr>
<td><strong>3. Verifiability versus relevance</strong></td>
<td>Emphasis on verifiability</td>
<td>Emphasis on relevance for planning and control</td>
</tr>
<tr>
<td><strong>4. Precision versus timeliness</strong></td>
<td>Emphasis on precision</td>
<td>Emphasis on timeliness</td>
</tr>
<tr>
<td><strong>5. Subject</strong></td>
<td>Primary focus is on the whole organization</td>
<td>Focuses on segments of an organization</td>
</tr>
<tr>
<td><strong>6. Requirements</strong></td>
<td>Must follow GAAP and prescribed formats</td>
<td>Need not follow GAAP or any prescribed format</td>
</tr>
</tbody>
</table>
Managerial accounting differs from financial accounting in that:

A. Managerial accounting does not have to conform to GAAP.

B. The primary purpose of managerial accounting is to generate the data to prepare the corporate tax return.

C. The primary purpose of financial accounting is to create information for use by management.

D. A managerial accounting system is required by GAAP.
## The Work of Management

| Planning          | • Establishing goals  
|                  | • Budgets          |
| Controlling      | • Gathering feedback  
|                  | • Performance Reports |
| Decision Making  | • Selecting a course of action |
2. Which of the following statements is true?

A. Managerial reports pertain to the entity as a whole and are highly aggregated.

B. Managerial accounting is primarily concerned with managers and external users.

C. Planning involves coordinating the diverse activities and human resources of a company to produce a smooth running operation.

D. Control involves performance evaluation by management.
Three major elements of product (inventoriable) costs in a manufacturing company

Direct Materials
Traced

Direct Labor
Traced

Manufacturing Overhead
Allocated

The Product
3. Direct manufacturing costs
   A. are accumulated in manufacturing overhead costs
   B. can be easily traced to individual products and also are a part of total manufacturing costs
   C. include direct labor and direct materials
   D. B and C are correct
Manufacturing costs are often classified as follows:

- **Direct Material**
- **Direct Labor**
- **Manufacturing Overhead**

Prime Cost

Conversion Cost
4. The following data relates to the Janzow Manufacturing Co. for last year:

- Selling and administrative expense: $250,000
- Direct materials: 140,000
- Manufacturing overhead: 95,000
- Direct labor: 315,000

Janzow’s conversion cost was:

- A. $800,000
- B. $660,000
- C. $455,000
- D. $410,000

$95,000 MOH + $315,000 DL = $410,000
Product costs include direct materials, direct labor, and manufacturing overhead.

Period costs are not included in product costs. They are expensed on the income statement.
5. The salary paid to the maintenance supervisor in a manufacturing plant is an example of:

<table>
<thead>
<tr>
<th>Product Cost</th>
<th>Manufacturing Overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. No</td>
<td>Yes</td>
</tr>
<tr>
<td>B. Yes</td>
<td>No</td>
</tr>
<tr>
<td>C. Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>D. No</td>
<td>No</td>
</tr>
</tbody>
</table>
6. Which of the following costs would be considered a period rather than a product cost in a manufacturing company?

A. Manufacturing equipment depreciation.
B. Property taxes on corporate headquarters.
C. Electrical costs to light the production facility.
D. Sales commissions.
E. Both B and D are correct.
Assigning Costs to Cost Objects

Direct costs
- Costs that can be easily and conveniently traced to a unit of product or other cost object.
- Examples: direct material and direct labor

Indirect costs
- Costs that cannot be easily and conveniently traced to a unit of product or other cost object.
- Example: manufacturing overhead
7. Which of the following is an indirect cost?
A. The cost of denim in a jeans factory.
B. The cost of mixing labor in a factory that makes over-the-counter pain relievers.
C. The cost of restriping the parking lot at a perfume factory.
D. The cost of bottles in a shampoo factory.
Manufacturing Cost Flows

- **Costs**
  - Material Purchases
  - Direct Labor
  - Manufacturing Overhead
  - Selling and Administrative

- **Balance Sheet**
  - Raw Materials
  - Work in Process
  - Finished Goods

- **Income Statement**
  - Selling and Administrative

- **Inventories**
  - Raw materials used
  - Goods completed/COGM

- **Expenses**
  - Period Costs
  - Cost of Goods Sold

- **Sold**
  - Selling and Administrative

**Diagram Overview**
- Material Purchases lead to Raw Materials.
- Direct Labor and Manufacturing Overhead lead to Work in Process.
- Selling and Administrative lead to Period Costs.
- Raw Materials and Work in Process lead to Finished Goods.
- Finished Goods and Period Costs lead to Selling and Administrative.
8. Beginning work in process was $125,000. Manufacturing costs incurred for the month were $835,000. There were $200,000 of partially finished goods remaining in work in process inventory at the end of the month. What was the cost of goods manufactured during the month?

A. $1,160,000
B. $910,000
C. $760,000
D. Cannot be determined.

$125,000 + $835,000 - $200,000 = $760,000
9. During January, the cost of goods manufactured was $93,000. The beginning finished goods inventory was $16,000 and the ending finished goods inventory was $20,000. What was the cost of goods sold for the month?

A. $129,000
B. $89,000
C. $93,000
D. $97,000

\[
\text{Review} \quad \text{($16,000 +$93,000 -$20,000) = $89,000}
\]
Job-Order Costing vs. Process Costing

**Job order costing**
- Many different jobs are worked on during the period.
- Costs are accumulated by individual jobs.
- **Job cost sheet** is the key document.
- **Unit cost** computed by job.

**Process costing**
- Many units of a single product is produced continuously or for a long period of time.
- Costs are accumulated by departments.
- **Department production report** is key document.
- **Unit costs** are computed by department.
10. When a company is deciding whether their cost accounting system should use process costing or job-order costing, all of the following should be considered except:

A. whether or not the units of product are relatively alike.

B. whether or not the actual costs and manufacturing activities associated with the different products are similar

C. the cost of collecting accounting data

D. the materials used in the manufacturing process
The predetermined overhead rate (POHR) used to apply overhead to jobs is determined before the period begins.

\[
POHR = \frac{\text{Estimated total manufacturing overhead cost for the coming period}}{\text{Estimated total units in the allocation base for the coming period}}
\]

Overhead applied = POHR \times \text{Actual activity}
The difference between the overhead cost applied to Work in Process and the actual overhead costs of a period is termed either underapplied or overapplied overhead.

<table>
<thead>
<tr>
<th>Underapplied overhead</th>
<th>Overapplied overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actual &gt; Applied OH</strong></td>
<td><strong>Actual &lt; Applied OH</strong></td>
</tr>
<tr>
<td>exists when the amount of overhead applied to jobs during the period using the predetermined overhead rate is <em>less than</em> the total amount of overhead actually incurred during the period.</td>
<td>exists when the amount of overhead applied to jobs during the period using the predetermined overhead rate is <em>greater than</em> the total amount of overhead actually incurred during the period.</td>
</tr>
</tbody>
</table>
Loblolly manufactures a specialty line of fragrances. The company uses a job order costing system. During March, the following costs were incurred on Job A1: direct materials $10,250 and direct labor $5,000. In addition, selling and shipping costs of $3,500 were incurred on the job. Manufacturing overhead was applied at the rate of $20 per machine-hour and Job A1 required 200 machine hours. If Job A1 consisted of 3,500 bottles of “Eau de Natural,” the Cost of Goods Sold per bottle of “Eau de Natural” was:

A. $6.50.
B. $6.00.
C. $5.70.
D. $5.50.

\[
\text{Cost per bottle} = \frac{\$10,250 + \$5,000 + ($20 \times 200 \text{ MHs})}{3,500 \text{ bottles}} = \$5.50 \text{ per bottle.}
\]
12. Kerri Company uses a predetermined overhead rate based on direct labor hours to apply manufacturing overhead to jobs. At the beginning of the year, the company estimated manufacturing overhead would be $100,000 and direct labor hours would be 10,000. The actual figures for the year were $110,000 for manufacturing overhead and 10,500 direct labor hours. The cost records for the year will show:

A. overapplied overhead of $10,000
B. underapplied overhead of $10,000
C. underapplied overhead of $5,000
D. overapplied overhead of $5,000

$100,000 / 10,000 DLH = $10 per DLH
$10 x 10,500 DLH = $105,000 applied OH
Actual OH $110,000 – Applied OH $105,000 = $5,000 underapplied
13. What journal entry is made in a job-order costing system when $8,000 of materials are requisitioned for general factory use instead of for use in a particular job?

A. Work-in-process $8,000
   Manufacturing overhead $8,000

B. Work-in-process $8,000
   Raw materials inventory $8,000

C. Manufacturing overhead $8,000
   Work-in-process $8,000

D. Manufacturing overhead $8,000
   Raw materials inventory $8,000
Traditional vs. ABC

**Plantwide Rate:**
- Simple method
- Single cost pool
- Single POHR rate
- Allocates overhead on the basis of DLH/MH
- Overhead costs may be caused by something other than volume of production
- Can distort product costs

**ABC Rates:**
- Complex method
- Multiple cost pools
- Multiple Activity rates
- Allocates overhead on the basis of activity measures that cause overhead costs
- More accurate costing
- More information for cost control
14. An ABC system differs from a traditional cost accounting system because it
A. may have several overhead cost pools and several activity rates that are used to allocate manufacturing overhead to the cost object.
B. ignores fixed costs when calculating activity rates.
C. Only includes variable costs in manufacturing overhead.
D. is not concerned with individual customer profitability.
15. If a costing system uses a single cost-allocation base as under a traditional costing system:

A. products that use relatively more of this base in comparison with the resources they actually consume tend to be undercosted.

B. products that use relatively less of this base in comparison with the resources they actually consume tend to be overcosted.

C. products that use relatively more of this base in comparison with the resources they actually consume tend to be overcosted.

D. products that use none of this base tend to be overcosted.
## Hierarchy of Activities

<table>
<thead>
<tr>
<th>Level</th>
<th>Activities</th>
<th>Activity Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit-level</td>
<td>Processing units on machines</td>
<td>Machine-hours</td>
</tr>
<tr>
<td></td>
<td>Processing units by hand</td>
<td>Direct labor-hours</td>
</tr>
<tr>
<td></td>
<td>Consuming factory supplies</td>
<td>Units produced</td>
</tr>
<tr>
<td>Batch-level</td>
<td>Processing purchase orders</td>
<td>Purchase orders processed</td>
</tr>
<tr>
<td></td>
<td>Processing production orders</td>
<td>Production orders processed</td>
</tr>
<tr>
<td></td>
<td>Setting up equipment</td>
<td>Number of setups</td>
</tr>
<tr>
<td></td>
<td>Handling materials</td>
<td>Pounds of material handled</td>
</tr>
<tr>
<td>Product-level</td>
<td>Testing new products</td>
<td>Hours of testing time</td>
</tr>
<tr>
<td></td>
<td>Administering parts inventories</td>
<td>Number of part types</td>
</tr>
<tr>
<td></td>
<td>Designing products</td>
<td>Hours of design time</td>
</tr>
<tr>
<td>Facility-level</td>
<td>General factory administration</td>
<td>Direct labor-hours</td>
</tr>
<tr>
<td></td>
<td>Plant building and grounds</td>
<td>Direct labor-hours</td>
</tr>
</tbody>
</table>
16. The power consumed to operate production equipment would be correctly identified as which of the following elements in the cost hierarchy:

A. unit-level costs
B. facility-level costs
C. batch-level costs
D. product-level costs
Graphic Example of Activity-Based Costing

First-Stage Cost Assignment

Various Manufacturing Overhead Costs

- Labor Related Pool
- Machine Related Pool
- Setup Pool
- Production Order Pool
- Parts Admin. Pool
- General Factory Pool

Second-Stage Allocations

- $/DLH
- $/MH
- $/Setup
- $/Order
- $/Part Type
- $/MH

Products

- Unit-Level Activity
- Batch-Level Activity
- Product-Level Activity
- Facility-Level Activity

NIU BUSINESS
NORTHERN ILLINOIS UNIVERSITY
17. Paul Company has two products: A and B. The company uses activity-based costing. The estimated total cost and expected activity for each of the company's three activity cost pools are as follows:

<table>
<thead>
<tr>
<th>Activity Cost Pool</th>
<th>Estimated Cost</th>
<th>Product A</th>
<th>Product B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1</td>
<td>$22,000</td>
<td>400</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>Activity 2</td>
<td>$16,240</td>
<td>380</td>
<td>200</td>
<td>580</td>
</tr>
<tr>
<td>Activity 3</td>
<td>$14,600</td>
<td>500</td>
<td>250</td>
<td>750</td>
</tr>
</tbody>
</table>

The activity rate under the activity-based costing system for Activity 3 is closest to:

A. $70.45.
B. $28.87.
C. $19.47. \[\frac{14,600}{750} = 19.47\text{ (rounded)}\]
D. $58.40.
Companies most likely to find ABC cost-effective

When a company has the following characteristics:

- Many different products/services that make different demands on resources.
- Faces stiff competition.
- Has access to the necessary accounting and information processing.
18. Activity-based costing is most likely to yield benefits for companies with all of the following characteristics, EXCEPT

A. numerous products that consume different amounts of resources.
B. operations that remain fairly consistent.
C. a highly competitive environment, where cost control is critical.
D. accessible accounting and information systems expertise to maintain the system.
FIFO Process Costing Method

- Beginning inventory is completed first.
- Prior period work separated from current period work.
- EU calculated only for work done during current period (3 layers/batches):
  1. Work done to complete beginning units.
  2. Work done on units started and completed this period (100%)
  3. Work done on units started this period but not completed (Ending Inventory).

- Only costs added this period used to determine cost per EU.
FIFO Process Costing Method (cont’d)

Assign costs to:

1. Transferred Out Units (Completed Units):
   - Started in prior period (BB WIP) and completed this period:
     - 1. Costs from BB WIP (prior period costs) and
     - 2. EU costs to complete BB WIP (current period costs).
   - Started this period & completed this period:
     - 1. EU (100%) times Total EU Cost (all current period costs).

2. EI (NOT Completed Units):
   - Started this period but NOT completed (EB WIP)
     - 1. EU (% completed) times EU Costs (all current period costs)
**PECUA**

- **P** Physical flow of goods in units
- **E** Equivalent units of work done during period
- **C** Costs incurred during the period
- **U** Unit cost (per EU)
- **A** Assignment of prior period cost and cost per EU to:
  - Transferred Out Units
    - WIP, beginning inventory units
    - Started & Completed units
  - WIP, ending inventory units
19. The Presto Company uses the FIFO method in its process costing system. The May 1 work in process inventory in a particular department consisted of 16,000 units, which were 40% complete with respect to conversion costs. The company started 52,400 units in May. There were 12,000 units in that department's ending work in process inventory on May 31, which were 75% complete with respect to conversion costs. The number of equivalent units for conversion costs during May in the department was:

A. 40,400
B. 47,000
C. 50,400
D. 59,000

<table>
<thead>
<tr>
<th>Calculation</th>
<th>Equivalent Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI: 16,000 x 60%</td>
<td>9,600 EU</td>
</tr>
<tr>
<td>S&amp;C: 40,400 x 100%</td>
<td>40,400 EU</td>
</tr>
<tr>
<td>EI: 12,000 x 75%</td>
<td><strong>9,000 EU</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59,000 EU</strong></td>
</tr>
</tbody>
</table>
## Cost Classifications for Predicting Cost Behavior

### Behavior of Cost (within the relevant range)

<table>
<thead>
<tr>
<th>Cost</th>
<th>In Total</th>
<th>Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Total variable cost changes as activity level changes.</td>
<td>Variable cost per unit remains the same over wide ranges of activity.</td>
</tr>
<tr>
<td>Fixed</td>
<td>Total fixed cost remains the same even when the activity level changes.</td>
<td>Average fixed cost per unit goes down as activity level goes up.</td>
</tr>
</tbody>
</table>
20. Which of the following statements regarding fixed costs is INCORRECT?

A. Expressing fixed costs on a per unit basis usually is the best approach for decision making.

B. Fixed costs expressed on a per unit basis will react inversely with changes in activity.

C. Assumptions by accountants regarding the behavior of fixed costs rest heavily on the concept of the relevant range.

D. Fixed costs expressed on a total cost basis will not increase when activity increases within the relevant range.
Mixed (Semi-variable) Costs

- Contains both variable and fixed cost elements.
- Increases in total but not proportionately with changes in the activity level.
- High-low method used to separate fixed from variable costs.
  - Problem: Uses only two data points which are often unusual
- Example: An salesperson who receives base pay plus commission.
Mixed Costs: Cost Formula

The total mixed cost line can be expressed as an equation: \[ Y = a + bX \]

Where:
- \( Y \) = the total mixed cost
- \( a \) = the total fixed cost (the vertical intercept of the line)
- \( b \) = the variable cost per unit of activity (the slope of the line)
- \( X \) = the level of activity
21. Kendra Corporation’s total utility costs during the past year were $1,200 during its highest month and $600 during its lowest month. These corresponded with 10,000 units of production during the high month and 2,000 units during the low month. Using the high-low method determine the cost formula for Kendra Corp.’s utility costs.

A. $450 + .075X
B. $0 + $0.120X.
C. $0 + $0.300X.
D. $600 + $0.060X.

Review

($1,200 - $600) / (10,000 – 2,000) = $600 / 8,000 = $0.075 VC per unit

\[ y = a + bx \]

\[ $1,200 = a + $0.075 \times 10,000 \]

\[ $1,200 = a + $750 \]

\[ $1,200 - $750 = a \]

\[ $450 = a \]

\[ y = $450 + $0.075X \]
### The Contribution Format

A comparison of the Contribution Income Statement with the Traditional Income Statement:

<table>
<thead>
<tr>
<th>Traditional Approach (costs organized by function)</th>
<th>Contribution Approach (costs organized by behavior)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales: $100,000</td>
<td>Sales: $100,000</td>
</tr>
<tr>
<td>Less cost of goods sold: 70,000</td>
<td>Less variable expenses: 60,000</td>
</tr>
<tr>
<td>Gross margin: $30,000</td>
<td>Contribution margin: $40,000</td>
</tr>
<tr>
<td>Less operating expenses: 20,000</td>
<td>Less fixed expenses: 30,000</td>
</tr>
<tr>
<td>Net operating income: $10,000</td>
<td>Net operating income: $10,000</td>
</tr>
</tbody>
</table>

- **Used primarily for external reporting.**
- **Used primarily by management.**
Dolan Company manufactures a single product that sells for $9.85 each. Forecasted sales for the coming year are 500,000 units. Dolan Company has projected the following costs to support the expected sales:

- Direct materials: $1,625,000
- Direct labor: $750,000
- Overhead:
  - Fixed: $675,000
  - Variable: $825,000

What is Dolan’s contribution margin for each unit of product?

- A. $6.60
- B. $5.25
- C. $3.45
- D. $2.10

\[
\text{Sales (500,000 units \times $9.85)} = \$4,925,000 \\
- \text{VC ($1,625,000 + $750,000 + $825,000) = 3,200,000} \\
= \text{CM} = \$1,725,000 \\
\text{\$1,725,000 / 500,000 units = $3.45}
\]
Break-Even Analysis: Equation Method

- Contribution Income Statement format.
- For Break-even:
  \[ \text{Total Sales} - \text{VC} - \text{FC} = \text{Net Operating Inc.} \]
- For BE in units use unit selling price & unit VC
- For BE in sales dollars use percent of VC to selling price
- At BE point, Operating Income or profits = 0

- For Target Profit:
  \[ \text{Total Sales} - \text{VC} - \text{FC} = \text{Target Profit} \]
The contribution margin method is a variation of the equation method.

Break-even point in units sold = \frac{Fixed \, expenses}{Unit \, contribution \, margin}

Break-even point in total sales dollars = \frac{Fixed \, expenses}{CM \, ratio}

For Target Profit: Add Target Profit to Fixed Expenses
22. Herb Huskie Co. manufactures decorative dog statues. In preparing for next year’s operations, management has developed the following estimates:

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (20,000 units)</td>
<td>$1,000,000</td>
<td>$50.00</td>
</tr>
<tr>
<td>VC</td>
<td>420,000</td>
<td>21.00</td>
</tr>
<tr>
<td>FC</td>
<td>110,000</td>
<td></td>
</tr>
</tbody>
</table>

The breakeven point in sales dollars is:

A. $189,655

\[ x - 0.42x - 110,000 = 0 \]

\[ 0.58x = 110,000 \]

\[ x = $189,655 \text{ (rounded)} \]

B. $198,665

C. $190,662

D. $0
24. Herb Huskie Co. manufactures decorative dog statues. In preparing for next year’s operations, management has developed the following estimates:

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</tr>
<tr>
<td>FC</td>
<td>110,000</td>
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</table>

The number of units that would need to be sold to reach a target income of $500,000:

A. 21,000

$50x – $21x - $110,000 = $500,000

B. 21,035

$29x = $110,000 + $500,000

x = $21,035 (rounded up)

C. 20,000

Always round up when units (you can’t sell a partial unit)

D. 21,034
The Margin of Safety

Excess of budgeted (or actual) sales over the break-even volume of sales. The amount by which sales can drop before losses begin to be incurred.

\[
\text{MOS in } \$, \% = \frac{\text{Total sales} - \text{Break-even sales}}{\text{Actual Sales } \$}
\]

\[
\text{MOS in units} = \frac{\text{MOS in } \$}{\text{SP per unit}}
\]
25. Herb Huskie Co. manufactures decorative dog statues. In preparing for next year’s operations, management has developed the following estimates:

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<tr>
<td>FC</td>
<td>110,000</td>
<td></td>
</tr>
</tbody>
</table>

What is the company's margin of safety in dollars?

A. $1,000,000  
B. $810,345  
C. $189,665  
D. $290,000

Fixed expenses ÷ CM ratio = BEP(in sales dollars)
$110,000 ÷ .58 = $189,655

Sales - Break-even sales = MOS in $
MOS in $: $1,000,000 - $189,655 = $810,345
MOS in %: $810,345 / $1,000,000 = 81%

MOS in units: $810,345 / $50 = 16,207 units (rounded)
Operating Leverage

- A measure of how sensitive net income is to percentage changes in sales.
- With high leverage, a small percentage increase in sales can produce a much larger percentage increase in net income.

\[
\text{Degree of operating leverage} = \frac{\text{Contribution margin}}{\text{Net income}}
\]
26. Herb Huskie Co. manufactures decorative dog statues. In preparing for next year’s operations, management has developed the following estimates:

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<tr>
<td>FC</td>
<td>110,000</td>
<td></td>
</tr>
</tbody>
</table>

What is the company's degree of operating leverage if net income is $470,000 and sales are $1,000,000?

A. 2

B. 1.5

C. 1.23

D. 2.2

\[
\text{Sales} - \text{VC} = \text{CM} \\
\$1,000,000 - \$420,000 = \$580,000 \\
\text{CM} - \text{FC} = \text{NOI} \\
\$580,000 - \$110,000 = \$470,000 \\
\text{CM} / \text{NOI} = \text{Degree of Operating Leverage} \\
\$580,000 \div \$470,000 = 1.23 \]
The Master Budget

- Sales Budget
- Production Budget
- Selling and Administrative Budget
- Direct Materials Budget
- Direct Labor Budget
- Manufacturing Overhead Budget
- Cash Budget

Budgeted Financial Statements
27. In order to determine the direct material budget, one must have information on
   A. material inventory needs.
   B. labor needs.
   C. overhead needs.
   D. supervisory needs.
Advantages of Budgeting

- Creates an early warning system
- Improves the effectiveness of allocating resources
- Helps in communicating business plans throughout the organization
- Coordinates the activities of each segment
- Requires mgmt to plan ahead and formalize future goals
- May provide positive motivation
- Provides definitive objectives for evaluating performance
- Improves the effectiveness of allocating resources
28. A budget program has these advantages except:

A. helps ensure that everyone in the organization is pulling in the same direction.

B. defines goals and objectives that can serve as benchmarks for future evaluations.

C. helps managers focus their attention on prior periods.

D. provides a means for allocating resources.
29. Apollo Company’s sales are 30% in cash and 70% on credit. Thirty percent of the credit sales are collected in the month of sale, 50% in the month following sale, and 15% in the second month following sale. The remaining 5% is uncollectible. Budgeted sales are as follows: $50,000 in July, $70,000 in August, and $60,000 in September. Budgeted cash receipts for September should be:

A. $60,500
B. $60,350
C. $70,350
D. $73,100

**September Collections**
- September: Cash: 60,000 * 30% = 18,000
- Credit: 60,000 * 70% * 30% = 12,600
- August: Credit: 70,000 * 70% * 50% = 24,500
- July: Credit: 50,000 * 70% * 15% = 5,250

Total collections = $60,350
Flexible Budgets

May be prepared for any activity level within the relevant range.

Shows revenues and costs that should have occurred at the actual level of activity, enabling “apples to apples” cost comparisons.

Helps managers control costs by revealing variances related to good cost control or lack of cost control.

Improve performance evaluation.
30. Lauter Printing uses two measures of activity, press runs and book set-ups. The cost formula for wages and salaries is $5,300 per month plus $480 per press run plus $1,080 per book set-up. The company expected its activity in October to be 169 press runs and 64 book set-ups, but the actual activity was 167 press runs and 60 book set-ups. The actual cost for wages and salaries in October was $155,690. The wages and salaries in the flexible budget for October would be closest to:

A. $155,540
B. $155,690
C. $150,260
D. $153,699

$5,300 + $480 \times 167 + $1,080 \times 60 = $150,260
Variance Analysis Matrix

- **Actual Quantity** × **Actual Price** → **Price Variance**
  - \( AQ \times AP \)
- **Actual Quantity** × **Standard Price** → **Quantity Variance**
  - \( AQ \times SP \)
- **Standard Quantity** × **Standard Price**
  - \( SQ \times SP \)

**Formulas:**

- **Price Variance:** \( AQ(AP - SP) \)
- **Quantity Variance:** \( SP(AQ - SQ) \)

**Definitions:**

- \( AQ \) = Actual Quantity
- \( AP \) = Actual Price
- \( SP \) = Standard Price
- \( SQ \) = Standard Quantity
Material Price & Quantity Variances

Material Price Variance:
1. Based on materials purchased (NOT used).
2. Should be recorded at the time materials are purchased.

Material quantity variance:
1. Based on materials used (NOT purchased).
2. Should be recorded at the time materials are used.
Price and quantity standards are determined separately for two reasons:

1. The purchasing manager is usually responsible for raw material purchase prices and the production manager is usually responsible for the quantity of raw material used.

2. The buying and using activities occur at different times. Raw material purchases may be held in inventory for a period of time before being used in production.
31. Ravena Labs., Inc. makes a single product which has the following standards:

   Direct Materials: 2.5 oz. @ $20 per oz.

Actual Information:
- 3,750 units of compound were produced.
- There was no beginning direct materials inventory.
- The ending direct materials inventory was 2,000 oz.
- Direct materials purchased: 12,000 oz. for $225,000.

The direct materials quantity variance is:

A. $52,500 unfavorable
B. $52,500 favorable
C. $12,500 unfavorable
D. $12,500 favorable

**Review**

12,000 oz. purchased – 2,000 oz. in EI = 10,000 oz. used.

SQ allowed = SQ per unit × Actual output = 2.5 × 3,750 = 9,375

Standard price × (Actual quantity used - Standard quantity) = MQV

$20 × (10,000 – 9,375) = $12,500 unfavorable
32. Which of the following statements is true:

A. The materials price variance is normally caused by the production department.

B. Material quantity variances can be caused by inexperienced workers, faulty machinery, inferior quality material or carelessness.

C. Ideal standards represent an efficient level of performance under normal operating conditions.

D. An unfavorable variance suggests efficiencies in incurring costs and in using materials and labor.
Responsibility for Labor Variances

Production managers are usually held accountable for labor variances because they can influence the:

- Mix of skill levels assigned to work tasks.
- Level of employee motivation.
- Quality of production supervision.
- Quality of training provided to employees.
33. Ravena Labs., Inc. makes a single product which has the following standards:

   Direct Labor: 1.4 hrs. @ $12.50 per hr.

Actual Information:

- 3,750 units of compound were produced.
- Direct labor hours worked: 5,600 hours at a cost of $67,200.

The direct labor efficiency variance is:

A. $1,400 favorable
B. $1,900 unfavorable
C. $3,750 favorable
D. $4,375 unfavorable

Review

**SH** = Standard hours per unit × Actual output = 1.4 × 3,750 = 5,250

**LEF** = Standard rate × (Actual hours - Standard hours)

**LEF** = $12.50 × (5,600 - 5,250) = $4,375 unfavorable
34. If inferior grade materials are purchased, the result may be:
   A. Unfavorable materials price variance
   B. Favorable materials price variance
   C. Unfavorable labor efficiency variance
   D. Favorable labor efficiency variance
   E. B and C are correct
   F. A and D are correct
Variable Overhead Variances

Spending (Rate) Variance
Results from paying more or less than expected for overhead items and from excessive usage of overhead items.

Efficiency Variance
Controlled by managing the overhead cost driver.
Ravena Labs., Inc. makes a single product which has the following standards:

   Direct Labor: 1.4 hrs. @ $12.50 per hr.
   Variable Overhead: 1.4 hrs @ $3.50 per hr.

Actual Information:

- 3,750 units of compound were produced.
- Direct labor hours worked: 5,600 hours at a cost of $67,200.
- Variable manufacturing overhead costs incurred amounted to $18,200.

The variable overhead spending (i.e. rate) variance is:

A. $1,400 favorable
B. $1,900 unfavorable
C. $3,750 favorable
D. $4,375 unfavorable

Actual Cost - (Actual hrs x Standard price) = VO SV
$18,200 – (5,600 hrs x $3.50) = $1,400 F
36. A variable overhead spending variance can occur because
   A. prices for individual overhead items have increased or decreased.
   B. more of an individual overhead item was used than expected.
   C. less of an individual overhead item was used than expected.
   D. All of the above.
Fixed Overhead Variances

**Budget Variance**
Results from paying more or less than expected for overhead items.

**Volume Variance**
Results from operating at an activity level different from the denominator activity.
37. Long Company’s flexible budget for manufacturing overhead indicates that the fixed overhead should be $30,000 at the denominator level of 3,000 standard direct labor hours. In March, the actual fixed overhead cost incurred was $33,000. Recall from the above data concerning Long Company that the standards call for 2 direct labor hours per unit of output and that in March, the company produced 2,000 units using 4,100 direct labor hours (DLHs). What was the fixed overhead volume variance for March?

A. $10,000 F
B. $10,000 U
C. $3,000 U
D. $3,000 F

Volume Variance = $10.00[3,000 hrs – (2,000 units x 2 hrs per unit)] = $10,000 F (company operated at a level greater than what was planned)
38. You are the president of Innovative Design Software Industries. Which of the following could cause you to have a favorable fixed overhead volume variance in your company?

A. Your landlord unexpectedly raises your rent after he sees your new sports car.

B. You chose a denominator (expected) activity level that was too high.

C. You produce more units than originally expected.

D. Your fixed portion of the predetermined overhead rate is understated.
Cost, profit, and investment centers are all known as responsibility centers.
39. Which of the following responsibility centers is a profit center?

A. The Accounting Department for a local bank.
B. The Maintenance Department for a charter airline service.
C. The headquarters for an international tire manufacturer.
D. The local branch office for a national bank.
Return on Investment (ROI)
Simple Formula

\[
\text{ROI} = \frac{\text{Net operating income}}{\text{Average operating assets}}
\]

- Income before interest and taxes (EBIT)
- Cash, accounts receivable, inventory, plant and equipment, and other productive assets.
40. ROI measures how much income is generated on the investments in assets. Tim’s Trucks has sales of $300,000, average operating assets of $160,000, and net operating income of $20,000. What is the Company’s ROI?:

A. 6.7%  
B. 12.5%  
C. 53.3%  
D. 14%

ROI = NOI/Average Operating Assets

\[
\text{ROI} = \frac{20,000}{160,000} = 12.5\%
\]
Return on Investment (ROI) Expanded Formula

ROI = Margin × Turnover

ROI = \( \frac{\text{Net operating income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Average operating assets}} \)

Profit Margin
Measures management’s ability to control operating expenses in relation to sales.

Investment Turnover
A measure of the sales that are generated for each dollar invested in operating assets.
41. ABC Corporation has sales of $1,000,000, gross profit of $550,000, net income of $150,000, average operating assets of $1,500,000 and fixed assets of $450,000. What is ABC’s return on investment (ROI)? (use the expanded formula)

A. 15%  
B. 10%  
C. 55%  
D. 45%  

**Margin:** $150,000 / $1,000,000 = 15%

**Turnover:** $1,000,000 / $1,500,000 = 6.67

15% x 6.67 = 10% (rounded)
Increasing ROI

There are three ways to increase ROI . . .

1. Increase Sales
2. Reduce Expenses
3. Reduce Assets
42. If sales and average operating assets for year 2 are identical to their values in year 1, yet net operating income is higher, year 2 turnover (compared to year 1 ROI) will:

A. increase.
B. decrease.
C. stay the same.
D. The direction of change in ROI cannot be determined by this information.
Calculating Residual Income

Residual income \[= \text{Net operating income} - \left( \frac{\text{Average operating assets}}{\times} \text{Minimum required rate of return} \right) \]

This computation differs from ROI.

ROI measures net operating income earned relative to the investment in average operating assets.

Residual income measures net operating income earned less the minimum required return on average operating assets.
43. Residual income measures net operating income earned less the minimum required return on average operating assets. Binford Tools earns $50,000 in the current period and has average operating assets of $175,000. The required rate of return is 20% on these assets. What is residual income?

A. $35,000

B. $15,000

\[
\text{NOI} - (\text{Avg. Op. Assets} \times \text{Min. Required Rate of Return}) = \text{Residual Income}
\]

\[
50,000 - (175,000 \times 20\%) = 50,000 - 35,000 = 15,000
\]
### Question 44

Herb Huskie currently has an ROI of 16%, average operating assets of $1,500,000 and NOI of $240,000. The minimum required rate of return is 10%. Huskie can make an investment of $250,000 for a new project that would generate a NOI of $30,000. Using ROI, would Huskie make this investment?

- **A. Yes, the new project would have a ROI of 12%.
- **B. Yes, the new project would have a ROI of 16%.
- **C. No, the new project would have a ROI of 12%.
- **D. No, the new project would have a ROI of 16%.

Huskie would not make the investment, because it is lower than their current ROI.

New project ROI = \( \frac{30,000}{250,000} = 12\% \)
Relevant Costs vs. Irrelevant Costs

- **Relevant (avoidable) cost or benefit:**
  - A cost or benefit that **differs**, in total, between the alternatives.

- **Irrelevant (Unavoidable) cost or benefit:**
  - Any cost or benefit that does **not differ** between the alternatives can be ignored.
    - **Sunk costs** (past costs)
    - **Future costs** that do not differ between alternatives.
45. You are trying to decide whether to trade in your inkjet printer for a more recent model. Your usage pattern will remain unchanged, but the old and new printers use different ink cartridges. Which of the following item(s) is (are) relevant to your decision?

I. The price of the new printer.
II. The price you paid for the old printer.
III. The trade-in value of the old printer.
IV. Paper costs.
V. The difference between ink cartridges’ costs.

A. I, II and V.
B. I, III, IV and V.
C. I, III and V.
D. All of the above are relevant.
Cost/Revenue Decisions: Drop or Retain a Segment

Two primary keys to analyzing cost/revenue decisions:

- Distinguish between relevant (avoidable) & irrelevant (unavoidable) costs & revenue
- Use a CM approach
  - Compare Lost CM to Savings in FC

Decision Rule:
- If the fixed cost savings exceed the lost contribution margin then drop the segment.
The company has three product lines, one of which reflects the following results:

- Sales $85,000
- Variable expenses $50,000
- Contribution margin $35,000
- Fixed expenses $55,000
- Net loss ($20,000)

If this product line is eliminated, 60% of the fixed expenses can be eliminated and the other 40% will be allocated to other product lines. If management decides to eliminate this product line, the company’s net income will

A. Increase by $2,000
B. Decrease by $2,000
C. Decrease by $35,000
D. Increase by $20,000

Lost CM ($35,000)
FC Savings ($55,000 x 60%) 33,000
Net effect on NOI ($ 2,000)
The Make or Buy Decision

- A decision concerning whether an item should be produced internally or purchased from an outside supplier.

- Distinguish between relevant (avoidable) & irrelevant (unavoidable) costs & revenue

- Compare: Costs to Buy to Costs to Make

- **Decision Rule:**
  - If the cost to make exceed the cost to buy then buy the item from an outside supplier.
47. Barsema Company produces 2,000 parts per year, which are used in the assembly of one of its products. The unit product cost of these parts is:

- Variable manufacturing cost: $32
- Fixed manufacturing cost: $18
- Unit product cost: $50

The part can be purchased from an outside supplier at $40 per unit. If the part is purchased from the outside supplier, two thirds of the fixed manufacturing costs can be eliminated. The annual impact on Barsema’s net operating income as a result of buying the part from the outside supplier would be:

A. $4,000 increase
B. $4,000 decrease
C. $8,000 increase
D. $8,000 decrease

Cost to buy: \((2,000 \times $40)\) $80,000
Costs to make:
- VC \((2,000 \times $32)\) 64,000
- FC \((2,000 \times $18 \times 2/3)\) 24,000

Increase in net operating income if bought from outside supplier $8,000
Opportunity Cost

The benefits that are foregone as a result of pursuing some course of action. Opportunity costs are not actual dollar outlays and are not recorded in the accounts of an organization.
48. Derek is performing incremental analysis in a make-or-buy decision for Item X. If Derek buys Item X, he can use its released productive capacity to produce Item Z. Derek will sell Item Z for $12,000 and incur production costs of $8,000. Derek’s incremental analysis should include an opportunity cost of:

A. $12,000.

B. $8,000.

C. $4,000.

D. There is no opportunity cost in this decision.

$12,000 revenue - $8,000 production costs = $4,000 opportunity cost added to the make column for Item X
Special Order

- A one-time order that is not considered part of the company’s normal ongoing business.
- When analyzing a special order, only the incremental costs and benefits are relevant.
- Determine the incremental revenue & costs of accepting the special order.

**Decision Rule:**
- Accept the special order if the cost does not exceed the revenue earned.
49. It costs a company $14 of variable costs and $6 of fixed costs to produce product Z200 that sells for $30. A foreign buyer offers to purchase 3,000 units at $18 each. The seller will incur special shipping costs of $5 per unit. If the special offer is accepted and produced with unused capacity, and none of the fixed costs are affected, then net income will:

| Increase in revenue: 3,000 units @ $18 each = $54,000 |
| Less: |
| Increase in VC: 3,000 units @ $14 VC each = (42,000) |
| Additional shipping costs: 3,000 units @ $5 each = (15,000) |
| Decrease in net income (3,000) |

D. decrease $3,000.
Constraint:

- Anything that prevents an organization from satisfying demand.

Examples:

- A machine that does not have enough capacity to satisfy current demand.
- Insufficient supplies of a critical part to satisfy current demand.
When a constraint exists:

**Decision:**

- **Which products should be emphasized?** (There is not enough capacity to satisfy demand, so something must be cut back.)
- **Fixed costs are not usually affected** in the short run. All of the machines and other fixed assets are in place—it is just a question of how they should be used.
- When fixed costs are unaffected by the choice of which product to emphasize, maximizing the total contribution margin will also maximize total profits.
  - The total contribution margin is maximized by emphasizing the products with the greatest contribution margin per unit of the constrained resource.
50. Huskie Company can sell all the units that it produces. Currently the company produces either Product A or Product B, but not both. The unit contribution margin of Product A is $16 and takes two machine hours to make, while product B has a unit CM of $30 and takes three machine hours to make. If there are 1,000 machine hours available to manufacture the products, income will be
A. $2,000 more if Product A is made.
B. $2,000 less if Product B is made.
C. $2,000 less if Product A is made.
D. the same if either product is made.

Product A:  $16 / 2 hrs = $8 per hr
Product B:  $30 / 3 hrs = $10 per hr

Product A:  1,000 x $8 = $8,000
Product B:  1,000 x $10 = $10,000
Time Value of Money

- Single sum vs. Annuity:
  - **Single sum:**
    - Single amount of money that exists now or will in the future.
  - **Annuity**
    - Series of equal periodic payments or receipts.
51. Joe Grant would like to have $25,000 in the bank 3 years from now in order to purchase a new car. How much would he have to deposit today in a bank savings account that pays 5% interest compounded annually in order to have the $25,000 three years from now?

5% Factors: PV of $1 for 1 pd.: 0.952
PV of $1 for 2 pds.: 0.907
PV of $1 for 3 pds.: 0.864

A. $21,600
B. $22,675
C. $23,800
D. $9,180

PV = FV (PVIF); where n = 3 periods, i = 5%
PV = $25,000 (0.864)
PV = $21,600
52. Shirt Company wants to purchase a new cutting machine for its sewing plant. The investment is expected to generate annual cash inflows of $300,000. The required rate of return is 12% and the current machine is expected to last for 4 years. What is the maximum dollar amount Shirt Company would be willing to spend for the machine, assuming its life is also four years?

12% Factors:  
- PV of $1 for 4 pds.: 0.636
- PV of an Annuity of $1 for 4 pds.: 3.037

A. $19,080  
B. $300,000  
C. $791,740  
D. $911,100

PVA = Pmt (PVIFA); where n = 4 periods, i = 12%
PVA = $300,000 (3.037)
PVA = $911,100
Capital budgeting tends to fall into two broad categories . . .

1. **Screening decisions.** Does a proposed project meet some present standard of acceptance?
   
   For Example: A minimum ROI

2. **Preference decisions.** Selecting from among several competing courses of action.
   
   For Example: Which machine (A or B) to purchase
Typical Cash Outflows

- Repairs and maintenance
- Initial investment
- Working capital
- Incremental operating costs
Typical Cash Inflows

- Salvage value
- Incremental revenues
- Release of working capital
- Reduction of costs
53. Depreciation is usually not considered an operating cash flow in capital budgeting because:

A. depreciation is usually a constant amount each year over the life of the capital investment.
B. deducting depreciation from operating cash flows would be counting the lump-sum amount twice.
C. depreciation usually does not result in an increase in working capital.
D. depreciation usually has no effect on the disposal price of the machine.
Choosing a Discount Rate

- The firm’s cost of capital is usually regarded as the most appropriate choice for the discount rate.
- The cost of capital is the average rate of return the company must pay to its long-term creditors and stockholders for the use of their funds.
54. An increase in the discount rate:
   A. Is one method of compensating for reduced risk
   B. Will have no effect on present value
   C. Will increase the present value of future cash flows
   D. Will decrease the present value of future cash flows
# The Net Present Value Method

## General decision rule

<table>
<thead>
<tr>
<th>If the Net Present Value is ...</th>
<th>Then the Project is ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive ...</td>
<td>Acceptable, since it promises a return greater than the required rate of return.</td>
</tr>
<tr>
<td>Zero ...</td>
<td>Acceptable, since it promises a return equal to the required rate of return.</td>
</tr>
<tr>
<td>Negative ...</td>
<td>Not acceptable, since it promises a return less than the required rate of return.</td>
</tr>
</tbody>
</table>
55. The following data pertain to an investment that is being considered by the management of DeKalb Pizza Company:

- Cost of the investment: $37,910
- Life of the project: 5 years
- Annual cost savings: $10,000
- Estimated salvage value: $2,000
- Discount rate: 10%

Factors:
- \(3.791 = \text{(Present Value of an Annuity, 5 periods, 10\%)}\)
- \(0.621 = \text{(Present Value of$1, 5 periods, 10\%)}\)

The net present value of the proposed investment is:

- A. $(6,860)
- B. $0
- C. $1,242
- D. $6,710

### Review

<table>
<thead>
<tr>
<th>Years</th>
<th>Cash Flows</th>
<th>10% Factor</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now</td>
<td>$(37,910)</td>
<td>1.000</td>
<td>$(37,910)</td>
</tr>
<tr>
<td>1-5</td>
<td>10,000</td>
<td>3.791</td>
<td>37,910</td>
</tr>
<tr>
<td>5</td>
<td>2,000</td>
<td>0.621</td>
<td>1,242</td>
</tr>
</tbody>
</table>

Net present value: $1,242
Other Approaches to Capital Budgeting Decisions

Other methods of making capital budgeting decisions include . . .

1. The Payback Method.
2. Simple Rate of Return.
The **payback period*** is the length of time that it takes for a project to recover its initial cost out of the cash receipts that it generates.

- When the net annual cash inflow is the same each year, this formula can be used to compute the payback period:

\[
\text{Payback period} = \frac{\text{Investment required}}{\text{Net annual cash inflow}}
\]

*Ignores time value of money and cash flows after the payback period.*
56. The net initial investment for a piece of construction equipment is $1,000,000. Annual cash inflows are expected to increase by $200,000 per year. The equipment has a 8-year useful life. What is the payback period?
A. 8 years
B. 7 years
C. 6 years
D. 5 years

$1,000,000/$200,000 = 5 years
The Simple Rate of Return Method

- Does not focus on cash flows -- rather it focuses on accounting income.

- The following formula is used to calculate the simple rate of return:

\[
\text{Simple rate of return} = \frac{\text{Incremental revenues} - \text{Incremental expenses, including depreciation}}{\text{Initial investment}}
\]
Frumer Company has purchased a machine that cost $30,000, that will save $6,000 per year in cash operating costs and has an expected life of 15 years with zero salvage value. The machine is depreciated on a straight-line basis. The simple rate of return on the machine is approximately:

A. 20%
B. 13.3% \[ \frac{\$6,000 - \$2,000 \text{ depr.}}{\$30,000 \text{ investment}} = 13.3\% \]
C. 18%
D. 10%
58. Examples of capital budgeting investments could include all of the following except?

A. building a new store.
B. installing a new computer system.
C. paying bonuses to the sales force.
D. developing a new Web site.
1. Managerial accounting differs from financial accounting in that:
   A. Managerial accounting does not have to conform to GAAP.
   B. The primary purpose of managerial accounting is to generate the data to prepare the corporate tax return.
   C. The primary purpose of financial accounting is to create information for use by management.
   D. A managerial accounting system is required by GAAP.

2. Which of the following statements is true?
   A. Managerial reports pertain to the entity as a whole and are highly aggregated.
   B. Managerial accounting is primarily concerned with managers and external users.
   C. Planning involves coordinating the diverse activities and human resources of a company to produce a smooth running operation.
   D. Control involves performance evaluation by management.

3. Direct manufacturing costs
   A. are accumulated in manufacturing overhead costs
   B. can be easily traced to individual products and also are a part of total manufacturing costs
   C. include direct labor and direct materials
   D. B and C are correct

4. The following data relates to the Janzow Manufacturing Co. for last year:
   Selling and administrative expense $250,000
   Direct materials 140,000
   Manufacturing overhead 95,000
   Direct labor 315,000

   Janzow’s conversion cost was:
   A. $800,000
   B. $660,000
   C. $455,000
   D. $410,000

5. The salary paid to the maintenance supervisor in a manufacturing plant is an example of:

<table>
<thead>
<tr>
<th>Product Cost</th>
<th>Manufacturing Overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. No</td>
<td>Yes</td>
</tr>
<tr>
<td>B. Yes</td>
<td>No</td>
</tr>
<tr>
<td>C. Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>D. No</td>
<td>No</td>
</tr>
</tbody>
</table>
6. Which of the following costs would be considered a period rather than a product cost in a manufacturing company?
   A. Manufacturing equipment depreciation.
   B. Property taxes on corporate headquarters.
   C. Electrical costs to light the production facility.
   D. Sales commissions.
   E. Both B and D are correct.

7. Which of the following is an indirect cost?
   A. The cost of denim in a jeans factory.
   B. The cost of mixing labor in a factory that makes over-the-counter pain relievers.
   C. The cost of restriping the parking lot at a perfume factory.
   D. the cost of bottles in a shampoo factory.

8. Beginning work in process was $125,000. Manufacturing costs incurred for the month were $835,000. There were $200,000 of partially finished goods remaining in work in process inventory at the end of the month. What was the cost of goods manufactured during the month?
   A. $1,160,000
   B. $910,000
   C. $760,000
   D. Cannot be determined.

9. During January, the cost of goods manufactured was $93,000. The beginning finished goods inventory was $16,000 and the ending finished goods inventory was $20,000. What was the cost of goods sold for the month?
   A. $129,000
   B. $89,000
   C. $93,000
   D. $97,000

10. When a company is deciding whether their cost accounting system should use process costing or job-order costing, all of the following should be considered except:
    A. whether or not the units of product are relatively alike.
    B. whether or not the actual costs and manufacturing activities associated with the different products are similar
    C. the cost of collecting accounting data
    D. the materials used in the manufacturing process
11. Loblolly manufactures a specialty line of fragrances. The company uses a job order costing system. During March, the following costs were incurred on Job A1: direct materials $10,250 and direct labor $5,000. In addition, selling and shipping costs of $3,500 were incurred on the job. Manufacturing overhead was applied at the rate of $20 per machine-hour and Job A1 required 200 machine hours. If Job A1 consisted of 3,500 bottles of “Eau de Natural,” the Cost of Goods Sold per bottle of “Eau de Natural” was:
   A. $6.50.
   B. $6.00.
   C. $5.70.
   D. $5.50.

12. Kerri Company uses a predetermined overhead rate based on direct labor hours to apply manufacturing overhead to jobs. At the beginning of the year, the company estimated manufacturing overhead would be $100,000 and direct labor hours would be 10,000. The actual figures for the year were $110,000 for manufacturing overhead and 10,500 direct labor hours. The cost records for the year will show:
   A. overapplied overhead of $10,000
   B. underapplied overhead of $10,000
   C. underapplied overhead of $5,000
   D. overapplied overhead of $5,000

13. What journal entry is made in a job-order costing system when $8,000 of materials are requisitioned for general factory use instead of for use in a particular job?
   A. Work-in-process $8,000
      Manufacturing overhead $8,000
   B. Work-in-process $8,000
      Raw materials inventory $8,000
   C. Manufacturing overhead $8,000
      Work-in-process $8,000
   D. Manufacturing overhead $8,000
      Raw materials inventory $8,000

14. An ABC system differs from a traditional cost accounting system because it
   A. may have several overhead cost pools and several activity rates that are used to allocate manufacturing overhead to the cost object.
   B. ignores fixed costs when calculating activity rates.
   C. Only includes variable costs in manufacturing overhead.
   D. is not concerned with individual customer profitability.
15. If a costing system uses a single cost-allocation base as under a traditional costing system:
   A. products that use relatively more of this base in comparison with the resources they
      actually consume tend to be undercosted.
   B. products that use relatively less of this base in comparison with the resources they
      actually consume tend to be overcosted.
   C. products that use relatively more of this base in comparison with the resources they
      actually consume tend to be overcosted.
   D. products that use none of this base tend to be overcosted.

16. The power consumed to operate production equipment would be correctly identified as
    which of the following elements in the cost hierarchy:
    A. unit-level costs
    B. facility-level costs
    C. batch-level costs
    D. product-level costs

17. Paul Company has two products: A and B. The company uses activity-based costing. The
    estimated total cost and expected activity for each of the company's three activity cost pools
    are as follows:

<table>
<thead>
<tr>
<th>Activity Cost Pool</th>
<th>Estimated Cost</th>
<th>Expected Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity 1</td>
<td>$22,000</td>
<td>100</td>
</tr>
<tr>
<td>Activity 2</td>
<td>$16,240</td>
<td>200</td>
</tr>
<tr>
<td>Activity 3</td>
<td>$14,600</td>
<td>250</td>
</tr>
</tbody>
</table>

    The activity rate under the activity-based costing system for Activity 3 is closest to:
    A. $70.45.
    B. $28.87.
    C. $19.47.
    D. $58.40.

18. Activity-based costing is most likely to yield benefits for companies with all of the
    following characteristics, EXCEPT
    A. numerous products that consume different amounts of resources.
    B. operations that remain fairly consistent.
    C. a highly competitive environment, where cost control is critical.
    D. accessible accounting and information systems expertise to maintain the system.
19. The Presto Company uses the FIFO method in its process costing system. The May 1 work in process inventory in a particular department consisted of 16,000 units, which were 40% complete with respect to conversion costs. The company started 52,400 units in May. There were 12,000 units in that department's ending work in process inventory on May 31, which were 75% complete with respect to conversion costs. The number of equivalent units for conversion costs during May in the department was:
   A. 40,400
   B. 47,000
   C. 50,400
   D. 59,000

20. Which of the following statements regarding fixed costs is INCORRECT?
   A. Expressing fixed costs on a per unit basis usually is the best approach for decision making.
   B. Fixed costs expressed on a per unit basis will react inversely with changes in activity.
   C. Assumptions by accountants regarding the behavior of fixed costs rest heavily on the concept of the relevant range.
   D. Fixed costs expressed on a total cost basis will not increase when activity increases within the relevant range.

21. Kendra Corporation’s total utility costs during the past year were $1,200 during its highest month and $600 during its lowest month. These corresponded with 10,000 units of production during the high month and 2,000 units during the low month. Using the high-low method determine the cost formula for Kendra Corp.’s utility costs.
   A. $450 + .075X
   B. $0 + $0.120X.
   C. $0 + $0.300X.
   D. $600 + $0.060X.

22. Dolan Company manufactures a single product that sells for $9.85 each. Forecasted sales for the coming year are 500,000 units. Dolan Company has projected the following costs to support the expected sales:
   Direct materials $1,625,000
   Direct labor $750,000
   Overhead:
   Fixed $675,000
   Variable $825,000

What is Dolan’s contribution margin for each unit of product?
   A. $6.60
   B. $5.25
   C. $3.45
   D. $2.10
USE THE FOLLOWING INFORMATION TO ANSWER QUESTIONS 23 – 26:

Herb Huskie Co. manufactures decorative dog statues. In preparing for next year’s operations, management has developed the following estimates:

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (20,000 units)</td>
<td>$1,000,000</td>
<td>$50.00</td>
</tr>
<tr>
<td>VC</td>
<td>420,000</td>
<td>21.00</td>
</tr>
<tr>
<td>FC</td>
<td>110,000</td>
<td></td>
</tr>
</tbody>
</table>

23. The breakeven point in sales dollars is:
   A. $189,655
   B. $198,665
   C. $190,662
   D. $0

24. The number of units that would need to be sold to reach a target income of $500,000:
   A. 21,000
   B. 21,035
   C. 20,000
   D. 21,034

25. What is the company's margin of safety in dollars?
   A. $1,000,000
   B. $810,345
   C. $189,665
   D. $290,000

26. What is the company's degree of operating leverage if net income is $470,000 and total dollar sales are $1,000,000?
   A. 2
   B. 1.5
   C. 1.23
   D. 2.2

27. In order to determine the direct material budget, one must have information on
   A. material inventory needs.
   B. labor needs.
   C. overhead needs.
   D. supervisory needs.

28. A budget program has these advantages except:
   A. helps ensure that everyone in the organization is pulling in the same direction.
   B. defines goals and objectives that can serve as benchmarks for future evaluations.
   C. helps managers focus their attention on prior periods.
   D. provides a means for allocating resources.
29. Apollo Company’s sales are 30% in cash and 70% on credit. Thirty percent of the credit sales are collected in the month of sale, 50% in the month following sale, and 15% in the second month following sale. The remaining 5% is uncollectible. Budgeted sales are as follows: $50,000 in July, $70,000 in August, and $60,000 in September. Budgeted cash receipts for September should be:
   A. $60,500
   B. $60,350
   C. $70,350
   D. $73,100

30. Lauter Printing uses two measures of activity, press runs and book set-ups, in the cost formulas in its budgets and performance reports. The cost formula for wages and salaries is $5,300 per month plus $480 per press run plus $1,080 per book set-up. The company expected its activity in October to be 169 press runs and 64 book set-ups, but the actual activity was 167 press runs and 60 book set-ups. The actual cost for wages and salaries in October was $155,690.

   The wages and salaries in the flexible budget for October would be closest to:
   A. $155,540
   B. $155,690
   C. $150,260
   D. $153,699

31. Ravena Labs., Inc. makes a single product which has the following standards:
   Direct Materials: 2.5 oz. @ $20 per oz.

   Actual Information:
   • 3,750 units of compound were produced.
   • There was no beginning direct materials inventory.
   • The ending direct materials inventory was 2,000 ounces.
   • Direct materials purchased: 12,000 ounces for $225,000.

   The direct materials quantity variance is:
   A. $52,500 unfavorable
   B. $52,500 favorable
   C. $12,500 unfavorable
   D. $12,500 favorable

32. Which of the following statements is true:
   A. The materials price variance is normally caused by the production department.
   B. Material quantity variances can be caused by inexperienced workers, faulty machinery, inferior quality material or carelessness.
   C. Ideal standards represent an efficient level of performance under normal operating conditions.
   D. An unfavorable variance suggests efficiencies in incurring costs and in using materials and labor.
33. Ravena Labs., Inc. makes a single product which has the following standards:
   Direct Labor: 1.4 hrs. @ $12.50 per hr.

   Actual Information:
   • 3,750 units of compound were produced.
   • Direct labor hours worked: 5,600 hours at a cost of $67,200.

   The direct labor efficiency variance is:
   A. $1,400 favorable
   B. $1,900 unfavorable
   C. $3,750 favorable
   D. $4,375 unfavorable

34. If inferior grade materials are purchased, the result may be:
   A. Unfavorable materials price variance
   B. Favorable materials price variance
   C. Unfavorable labor efficiency variance
   D. Favorable labor efficiency variance
   E. B and C are correct
   F. A and D are correct

35. Ravena Labs., Inc. makes a single product which has the following standards:
   Direct Labor: 1.4 hrs. @ $12.50 per hr.
   Variable Overhead: 1.4 hrs @ $3.50 per hr.

   Actual Information:
   • 3,750 units of compound were produced.
   • Direct labor hours worked: 5,600 hours at a cost of $67,200.
   • Variable manufacturing overhead costs incurred amounted to $18,200.

   The variable overhead spending (i.e. rate) variance for October is:
   A. $1,400 favorable
   B. $1,900 unfavorable
   C. $3,750 favorable
   D. $4,375 unfavorable

36. A variable overhead spending variance can occur because
   A. prices for individual overhead items have increased or decreased.
   B. more of an individual overhead item was used than expected.
   C. less of an individual overhead item was used than expected.
   D. All of the above.
37. Long Company’s flexible budget for manufacturing overhead indicates that the fixed overhead should be $30,000 at the denominator level of 3,000 standard direct labor hours. In March, the actual fixed overhead cost incurred was $33,000. Recall from the above data concerning Long Company that the standards call for 2 direct labor hours per unit of output and that in March, the company produced 2,000 units using 4,100 direct labor hours (DLHs). What was the fixed overhead volume variance for March?
   A. $10,000 F
   B. $10,000 U
   C. $3,000 U
   D. $3,000 F

38. You are the president of Innovative Design Software Industries. Which of the following could cause you to have a favorable fixed overhead volume variance in your company?
   A. Your landlord unexpectedly raises your rent after he sees your new sports car.
   B. You chose a denominator (expected) activity level that was too high.
   C. You produce more units than originally expected.
   D. Your fixed portion of the predetermined overhead rate is understated.

39. Which of the following responsibility centers is a profit center?
   A. The Accounting Department for a local bank.
   B. The Maintenance Department for a charter airline service.
   C. The headquarters for an international tire manufacturer.
   D. The local branch office for a national bank.

40. ROI measures how much income is generated on the investments in assets. Tim’s Trucks has sales of $300,000, average operating assets of $160,000, and net operating income of $20,000. What is the Company’s ROI?:
   A. 6.7%
   B. 12.5%
   C. 53.3%
   D. 14%

41. ABC Corporation has sales of $1,000,000, gross profit of $550,000, net income of $150,000, average operating assets of $1,500,000 and fixed assets of $450,000. What is ABC’s return on investment (ROI) (Use the expanded formula)
   A. 15%
   B. 10%
   C. 55%
   D. 45%

42. If sales and average operating assets for year 2 are identical to their values in year 1, yet net operating income is higher, year 2 turnover (compared to year 1 ROI) will:
   A. increase.
   B. decrease.
   C. stay the same.
   D. The direction of change in ROI cannot be determined by this information.
43. Residual income measures net operating income earned less the minimum required return on average operating assets. Binford Tools earns $50,000 in the current period and has average operating assets of $175,000. The required rate of return is 20% on these assets. What is residual income?
   A. $35,000
   B. $15,000
   C. $10,000
   D. $25,000

44. Herb Huskie currently has an ROI of 16%, average operating assets of $1,500,000 and NOI of $240,000. The minimum required rate of return is 10%. Huskie can make an investment of $250,000 for a new project that would generate a NOI of $30,000. Using ROI, would Huskie make this investment?
   A. Yes, the new project would have a ROI of 12%.
   B. Yes, the new project would have a ROI of 16%.
   C. No, the new project would have a ROI of 12%.
   D. No, the new project would have a ROI of 16%.

45. You are trying to decide whether to trade in your inkjet printer for a more recent model. Your usage pattern will remain unchanged, but the old and new printers use different ink cartridges. Which of the following item(s) is (are) relevant to your decision?
   I. The price of the new printer.
   II. The price you paid for the old printer.
   III. The trade-in value of the old printer.
   IV. Paper costs.
   V. The difference between ink cartridges’ costs.
   A. I, II and V.
   B. I, III, IV and V.
   C. I, III and V.
   D. All of the above are relevant.

46. The company has three product lines, one of which reflects the following results:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$85,000</td>
</tr>
<tr>
<td>Variable expenses</td>
<td>50,000</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>35,000</td>
</tr>
<tr>
<td>Fixed expenses</td>
<td>55,000</td>
</tr>
<tr>
<td>Net loss</td>
<td>($20,000)</td>
</tr>
</tbody>
</table>

If this product line is eliminated, 60% of the fixed expenses can be eliminated and the other 40% will be allocated to other product lines. If management decides to eliminate this product line, the company’s net income will
   A. Increase by $2,000
   B. Decrease by $2,000
   C. Decrease by $35,000
   D. Increase by $20,000.
47. Barsema Company produces 2,000 parts per year, which are used in the assembly of one of its products. The unit product cost of these parts is:

- Variable manufacturing cost $32
- Fixed manufacturing cost 18
- Unit product cost $50

The part can be purchased from an outside supplier at $40 per unit. If the part is purchased from the outside supplier, two thirds of the fixed manufacturing costs can be eliminated. The annual impact on Barsema's net operating income as a result of buying the part from the outside supplier would be:

A. $4,000 increase
B. $4,000 decrease
C. $8,000 increase
D. $8,000 decrease

48. Derek is performing incremental analysis in a make-or-buy decision for Item X. If Derek buys Item X, he can use its released productive capacity to produce Item Z. Derek will sell Item Z for $12,000 and incur production costs of $8,000. Derek’s incremental analysis should include an opportunity cost of:

A. $12,000.
B. $8,000.
C. $4,000.
D. There is no opportunity cost in this decision.

49. It costs a company $14 of variable costs and $6 of fixed costs to produce product Z200 that sells for $30. A foreign buyer offers to purchase 3,000 units at $18 each. The seller will incur special shipping costs of $5 per unit. If the special offer is accepted and produced with unused capacity, and none of the fixed costs are affected, then net income will:

A. increase $3,000.
B. increase $12,000.
C. decrease $12,000.
D. decrease $3,000.

50. Huskie Company can sell all the units that it produces. Currently the company produces either Product A or Product B, but not both. The unit contribution margin of Product A is $16 and takes two machine hours to make, while product B has a unit CM of $30 and takes three machine hours to make. If there are 1,000 machine hours available to manufacture a product, income will be:

A. $2,000 more if Product A is made.
B. $2,000 less if Product B is made.
C. $2,000 less if Product A is made.
D. the same if either product is made.
51. Joe Grant would like to have $25,000 in the bank 3 years from now in order to purchase a new car. How much would he have to deposit today in a bank savings account that pays 5% interest compounded annually in order to have the $25,000 three years from now?

5% Factors:  
PV of $1 for 1 pd.:  0.952  
PV of $1 for 2 pds.:  0.907  
PV of $1 for 3 pds.:  0.864

A. $21,600  
B. $22,675  
C. $23,800  
D. $9,180

52. Shirt Company wants to purchase a new cutting machine for its sewing plant. The investment is expected to generate annual cash inflows of $300,000. The required rate of return is 12% and the current machine is expected to last for 4 years. What is the maximum dollar amount Shirt Company would be willing to spend for the machine, assuming its life is also four years?

12% Factors:  
PV of $1 for 4 pds.:  0.636  
PV of an Annuity of $1 for 4 pds.:  3.037

A. $507,000  
B. $720,000  
C. $791,740  
D. $911,100

53. Depreciation is usually not considered an operating cash flow in capital budgeting because:

A. depreciation is usually a constant amount each year over the life of the capital investment.  
B. deducting depreciation from operating cash flows would be counting the lump-sum amount twice.  
C. depreciation usually does not result in an increase in working capital.  
D. depreciation usually has no effect on the disposal price of the machine.

54. An increase in the discount rate:

A. is one method of compensating for reduced risk  
B. will have no effect on present value  
C. will increase the present value of future cash flows  
D. will decrease the present value of future cash flows
55. The following data pertain to an investment that is being considered by the management of DeKalb Pizza Company:
   Cost of the investment   $37,910
   Life of the project           5 years
   Annual cost savings      $ 10,000
   Estimated salvage value  $ 2,000
   Discount rate    10%

Factors: 3.791 = (Present Value of an Annuity, 5 periods, 10%)
          0.621 = (Present Value of $1, 5 periods, 10%)

The net present value of the proposed investment is:
A.  ($6,860)
B.  $0
C.  $1,242
D.  $6,710

56. The net initial investment for a piece of construction equipment is $1,000,000. Annual cash inflows are expected to increase by $200,000 per year. The equipment has a 8-year useful life. What is the payback period?
A.  8 years
B.  7 years
C.  6 years
D.  5 years

57. Frumer Company has purchased a machine that cost $30,000, that will save $6,000 per year in cash operating costs and has an expected life of 15 years with zero salvage value. The machine is depreciated on a straight-line basis. The simple rate of return on the machine is approximately:
A.  20%
B.  13.3%
C.  18%
D.  10%

58. Examples of capital budgeting investments could include all of the following except?
A.  building a new store.
B.  installing a new computer system.
C.  paying bonuses to the sales force.
D.  developing a new Web site.
MANAGERIAL ACCOUNTING

AQE REVIEW ANSWER KEY

1. A
2. D
3. D
4. D ($95,000 MOH + $315,000 DL = $410,000)
5. C
6. E
7. C
8. C ($125,000 + $835,000 - $200,000 = $760,000)
9. B ($16,000 + $93,000 - $20,000 = $89,000)
10. D
11. D ($10,250 + $5,000 + ($20 x 200 MHs) / 3,500 bottles = $5.50 per bottle)
12. C $100,000 / 10,000 DLH = $10 per DLH
    10,500 DLH x $10 = $105,000 applied OH
    Actual OH $110,000 – Applied OH $105,000 = $5,000 underapplied
13. D
14. A
15. C
16. A
17. C $14,600 / 750 = $19.47 (rounded)
18. B
19. D BI: 16,000 x 60% = 9,600 EU
    S&C: 40,400 x 100% = 40,400 EU
    EI: 12,000 x 75% = 9,000 EU
    59,000 EU
20. A
21. A ($1,200 - $600) / (10,000 - 2,000) =
    $600 / 8,000 = $0.075 VC per unit
y = a + bx
$1,200 = a + $0.075 (10,000)
$1,200 = a + $750
$1,200 - $750 = a
$450 = a
y = $450 + $0.075X
22. C Sales (500,000 units X $9.85) = $4,925,000
    - VC ($1,625,000 + $750,000 + $825,000) = 3,200,000
    = CM = $1,725,000
    $1,725,000 / 500,000 units = $3.45
23. A x - .42x - $110,000 = 0
    .58x = 110,000
    x = $189,655 (rounded)
24. B  
\[ B \] 
\[ 50x - 21x - 110,000 = 500,000 \]
\[ 29x = 110,000 + 500,000 \]
\[ x = \$21,035 \text{ (rounded)} \]

25. B  
Fixed expenses ÷ CM ratio = Break-even point (in sales dollars)  
\[ \$110,000 ÷ .58 = $189,655 \text{ (from previous calculation in #22)} \]
Sales - Break-even sales = Margin of safety (in dollars)  
\[ $1,000,000 - 118,655 = $810,345 \]

26. C  
Contribution Margin = Sales - VC  
\[ $1,000,000 - 420,000 = $580,000 \text{ Contribution Margin} \]
CM – FC = NOI  
\[ $580,000 - 110,000 = $470,000 \text{ NOI} \]
Degree of operating leverage = Contribution margin ÷ Net income  
\[ $580,000 ÷ 470,000 = 1.23 \]

27. A

28. C

29. B  
September Collections  
September:  
Cash: 60,000 * 30% = 18,000  
Credit: 60,000 * 70% * 30% = 12,600  
August:  
Credit: 70,000 * 70% * 50% = 24,500  
July:  
Credit: 50,000 * 70% * 15% = 5,250  
Total collections = $60,350

30. C  
\[ \$5,300 + \$480 \times 167 + \$1,080 \times 60 = \$150,260 \]

31. C  
12,000 oz. purchased – 2,000 oz. in EI = 10,000 oz. used.  
SQ allowed = SQ per unit x Actual output = 2.5 x 3,750 = 9,375  
Standard price x (Actual quantity used - Standard quantity) = MQV  
\[ $20 \times (10,000 - 9,375) = \$12,500 \text{ unfavorable MQV} \]

32. B

33. D  
SH = Standard hours per unit x Actual output = 1.4 x 3,750 = 5,250  
Labor efficiency variance = Standard rate x (Actual hours - Standard hours)  
\[ = \$12.50 \times (5,600 - 5,250) = \$4,375 \text{ unfavorable} \]

34. E

35. A  
Actual Cost - (Actual hrs x Standard price) = VO SV  
\[ \$18,200 - (5,600 hrs x \$3.50) = \$1,400 \text{ F} \]

36. D

37. A  
Volume Variance = $10.00[3,000 hrs – (2,000 units x 2 hrs per unit)] = $10,000 F  
(company operated at a level greater than what was planned)

38. C

39. D

40. B  
ROI = NOI/Average Operating Assets = 20,000/160,000 = 12.5% ROI

41. B  
Margin: $150,000 / $1,000,000 = 15%  
Turnover: $1,000,000 / $1,500,000 = 6.67  
15% x 6.67 = 10% (rounded)

42. C

43. B  
\[ 50,000 - (175,000 \times 20\%) = 50,000 - 35,000 = 15,000 \]
44. C Huskie would not make the investment, because it is lower than their current ROI.
New project ROI = 30,000/250,000 = 12%

45. C

46. B Lost CM ($35,000)
   FC Savings ($55,000 x 60%) 33,000
   Net effect on NOI (decrease) ($2,000)

47. C Cost to buy: (2,000 x $40) 80,000
   Costs to make:
   VC (2,000 x $32) 64,000
   FC (2,000 x $18 x 2/3) 24,000
   Increase in net operating income if bought from outside supplier 88,000

48. C $12,000 revenue - $8,000 production costs = $4,000 opportunity cost added to the make column for Item X

49. D Increase in revenue: 3,000 units @ $18 each = 54,000
   Less:
   Increase in VC: 3,000 units @ $14 VC each = (42,000)
   Additional shipping costs: 3,000 units @ $5 each = (15,000)
   Decrease in net income ($3,000)

50. C Product A: $16 / 2 hrs = $8 per hr
    Product B: $30 / 3 hrs = $10 per hr
    Product A: 1,000 x $8 = $8,000
    Product B: 1,000 x $10 = $10,000

51. A PV = FV (PVIF); where n = 3 periods, i = 5%
    PV = $25,000 (0.864)
    PV = $21,600

52. D PVA = Pmt (PVIFA); where n = 4 periods, i = 12%
    PVA = $300,000 (3.037)
    PVA = $911,100

53. B

54. D

55. C

<table>
<thead>
<tr>
<th>Years</th>
<th>Cash Flows</th>
<th>10% Factor</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now</td>
<td>$(37,910)</td>
<td>1.000</td>
<td>(37,910)</td>
</tr>
<tr>
<td>1-5</td>
<td>10,000</td>
<td>3.791</td>
<td>37,910</td>
</tr>
<tr>
<td>5</td>
<td>2,000</td>
<td>0.621</td>
<td>1,242</td>
</tr>
</tbody>
</table>

Net present value 1,242
Factors: 3.791 = (Present Value of an Annuity, 5 periods, 10%)
         0.621 = (Present Value of $1, 5 periods, 10%)

56. D $1,000,000/$200,000 = 5 years

57. B $6,000 - $2,000 depr. / $30,000 investment = 13.3%

58. C