Example Accounting Problems

Problem 1: The Accounting Equation

Question 1: Define the three components of the Accounting Equation.

Answer to Question 1:

- Assets: All the property owned by a business.
- Liabilities: A company’s outstanding debts.
- Owners’ Equity: The company’s ownership interests in its property after all debts have been repaid.

Question 2: If a business owns a piece of real estate worth $250,000, and they owe $180,000 on a loan for that real estate, what is owners’ equity in the property?

Answer to Question 1: $70,000

Problem 2: The Balance Sheet

Question 1: Categorize the following accounts as to whether they’re Asset, Liability, or Owners’ Equity accounts.

- Common Stock: Owners’ Equity
- Accounts Receivable: Asset
- Retained Earnings: Owners’ Equity
- Cash: Asset
- Notes Payable: Liability

Question 2: For each of the following assets or liabilities, state whether it is current or non-current:

- Accounts Payable: current liability
- Cash: current asset
- Property, Plant, and Equipment: non-current asset
- Note Payable: non-current liability (Though if a portion of the note is due within the next twelve months, that portion should be shown as a current liability.)
- Inventory: current asset

Problem 3: The Income Statement

Question 1: Given the following information, calculate ABC Corp’s Net Income:

- Sales: $260,000
- Cost of Goods Sold: $100,000
- Salaries and Wages: $20,000
- Rent Expense: $15,000
- Advertising Expense: $35,000
- Cost of repairs resulting from fire: $50,000

Answer to Question 1: $40,000 (Sales of $260,000 minus $220,000 of total expenses.)

Question 2: Using the above information, calculate ABC Corp’s Operating Income.
Answer to Question 2: $90,000 (Operating Income is intended to represent income from typical business operations. As a result, expenses resulting from a fire would certainly not be included when calculating Operating Income.)

Question 3: Using the above information, calculate ABC Corp’s Gross Profit.

Answer to Question 3: $160,000 (Sales minus Cost of Goods Sold)

Problem 4: The Statement of Changes in Equity

Question 1: Using the following information, calculate the ending balance in Retained Earnings:

- Beginning Retained Earnings: $10,000
- Net Income: $5,000
- Dividends Paid: $4,000

Answer to Question 1: $11,000

Question 2: Calculate Net Income given the following information:

- Consulting Revenue: $50,000
- Rent Expense: $5,000
- Software Licensing Fees: $3,000
- Dividends Paid: $6,000
- Advertising Expense: $20,000

Answer to Question 2: $22,000 (Remember, dividends are not an expense! They are a distribution of net income rather than a reduction of net income.)

Question 3: Using the following information, calculate how much was paid out in dividends during the year:

- Beginning Retained Earnings: $40,000
- Net Income: $15,000
- Ending Retained Earnings: $30,000

Answer to Question 3: $25,000

Problem 5: The Cash Flow Statement

Question 1: Calculate cash flow from operating activities using the following information:

- Cash sales: $10,000
- Credit sales: $15,000
- Cash received from prior credit sales: $8,000
- Rent paid: $3,000
- Inventory purchased: $6,000
- Wages paid: $5,000

Answer to Question 1: Net cash inflow of $4,000. (Remember not to include the $15,000 of credit sales when calculating cash flow.)

Question 2: Categorize the following cash flows as to whether they are operating, investing, or financing activities:

- Taxes paid
- Dividends paid to shareholders
- Interest paid on loans
- Dividends received on investments
Answer to Question 2:

- Taxes paid: Operating Activities
- Dividends paid to shareholders: Financing Activities
- Interest paid on loans: Operating Activities (Note: Principal paid on loans is a financing activity.)
- Dividends received on investments: Investing Activities
- Cash sales: Operating Activities
- Purchase of new office furniture: Investing Activities

Problem 6: Financial Ratios

Questions 1-3: Use the following income statement and balance sheet to answer the following questions.

**Income Statement**

Sales 130,000
Cost of Goods Sold 26,000
Profit Margin 104,000
Salaries and Wages 15,000
Rent Expense 5,000
Licensing Expenses 20,000
Advertising Expense 4,000
Total Expenses 44,000
**Net Income** 60,000

**Balance Sheet**

Assets
- Cash 10,000
- Inventory 15,000
- Property, Plant, and Equipment 250,000
- Accounts Receivable 5,000
Total Assets 280,000

Liabilities
- Accounts Payable 20,000
- Notes Payable 40,000
Total Liabilities 60,000

Owners’ Equity
- Common Stock 120,000
- Retained Earnings 100,000
Total Owners’ Equity 220,000

**Question 1:** Calculate the company’s current ratio and quick ratio.

**Answer to Question 1:** Current ratio = 1.5 (30,000 current assets ÷ 20,000 current liabilities). Quick ratio = 0.75 (15,000 non-inventory current assets ÷ 20,000 current liabilities).

**Question 2:** Calculate the company’s return on assets and return on equity.
Answer to Question 2: Return on assets = 21.4% (60,000 net income ÷ 280,000 total assets). Return on equity = 27.3% (60,000 net income ÷ 220,000 shareholders’ equity)

Question 3: Calculate the company’s debt ratio and debt to equity ratio.

Answer to Question 3: Debt ratio = 21.4% (60,000 liabilities ÷ 280,000 assets). Debt to equity ratio = 27.3% (60,000 liabilities ÷ 220,000 shareholders’ equity).

Problem 7: The Accounting Close Process

Prepare closing journal entries for Mario’s Mobile Products, which has the following end-of-year trial balance:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>40,000</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>8,000</td>
</tr>
<tr>
<td>Property, Plant, and Equipment</td>
<td>150,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>30,000</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>15,000</td>
</tr>
<tr>
<td>Wages Payable</td>
<td>22,000</td>
</tr>
<tr>
<td>Common Stock</td>
<td>50,000</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>60,000</td>
</tr>
<tr>
<td>Sales</td>
<td>380,000</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>120,000</td>
</tr>
<tr>
<td>Rent Expense</td>
<td>60,000</td>
</tr>
<tr>
<td>Wages and Salary Expense</td>
<td>110,000</td>
</tr>
<tr>
<td>Advertising Expense</td>
<td>9,000</td>
</tr>
</tbody>
</table>

Answer:

Sales 380,000
Income Summary 380,000
Income Summary 120,000
Cost of Goods Sold 120,000
Income Summary 60,000
Rent Expense 60,000
Income Summary 110,000
Wages and Salary Expense 110,000
Income Summary 9,000
Advertising Expense 9,000

Alternatively, the above can be combined into one journal entry:

Sales 380,000
Cost of Goods Sold 120,000
Rent Expense 60,000
Wages and Salary Expense 110,000
Advertising Expense 9,000
Income Summary 81,000

In either case, the following closing journal entry is also required in order to close out the Income Summary account and transfer the balance — representing the business’s net income for the period — into Retained Earnings:
Problem 8 Depreciation of Fixed Assets

Questions 1-6: Prepare journal entries to record each of the following events:

Question 1: Liliana spends $20,000 (cash) on a piece of equipment for use in her restaurant. She plans to use the straight-line method to depreciate the equipment over 5 years. She expects it to have no value at the end of the 5 years.

Answer to Question 1:

*To record the purchase:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>20,000</td>
</tr>
<tr>
<td>Cash</td>
<td>20,000</td>
</tr>
</tbody>
</table>

*To record depreciation every year:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation Expense</td>
<td>4,000</td>
</tr>
<tr>
<td>Accumulated Depreciation</td>
<td>4,000</td>
</tr>
</tbody>
</table>

Question 2: After 4 years, Liliana sells the equipment for $4,000.

Answer to Question 2:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>4,000</td>
</tr>
<tr>
<td>Accumulated Depreciation</td>
<td>16,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Question 3: Same as question 2, except she sells the equipment for $6,000.

Answer to Question 3:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>6,000</td>
</tr>
<tr>
<td>Accumulated Deprecation</td>
<td>16,000</td>
</tr>
<tr>
<td>Gain on Sale of Equipment</td>
<td>2,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Question 4: Same as question 2, except she sells the equipment for $2,000.

Answer to Question 4:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>2,000</td>
</tr>
<tr>
<td>Accumulated Deprecation</td>
<td>16,000</td>
</tr>
<tr>
<td>Loss on Sale of Equipment</td>
<td>2,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Question 5: Oscar is a self-employed electrician. He purchases a piece of equipment for $30,000 cash. He plans to use it for 10 years, at which point he plans to sell it for approximately $4,000. He elects to use the straight-line method of depreciation.
Answer to Question 5:

To record the purchase:

Equipment 30,000
Cash 30,000

To record depreciation every year:

Depreciation Expense 2,600
Accumulated Depreciation 2,600

(Depreciable value is $26,000. If depreciated over 10 years, that’s $2,600 depreciation per year.)

Question 6: Sandra runs a business making embroidered linens for wedding receptions. She purchases a new piece of equipment for $15,000 in credit. She plans to use the units of production method of depreciation. The equipment is expected to produce approximately 5,000 linens, at which point it will be valueless. During the first year after buying the equipment, Sandra uses it to produce 1,500 linens.

Answer to Question 6:

To record the purchase:

Equipment 15,000
Accounts Payable 15,000

When the purchase is eventually paid for:

Accounts Payable 15,000
Cash 15,000

To record depreciation for the first year:

Depreciation Expense 4,500
Accumulated Depreciation 4,500

($15,000 depreciable value ÷ 5,000 units = $3 of depreciation per unit. 1,500 units produce x $3 per unit = $4,500 depreciation expense.)

Problem 9: Amortization of Intangible Assets

Questions 1-2: Prepare journal entries to record each of the following events.

Question 1: Trent runs a business as an engineering consultant. He invents a new system for preparing bridges to deal with extreme weather conditions. He spends $28,000 securing a 14-year patent for his invention. He expects the system to be used for the next few decades at least.

Answer to Question 1:

To record receiving the patent:

Patents 28,000
Cash 28,000
To record amortization expense each year:

Amortization Expense  2,000
Accumulated Amortization  2,000

Question 2: Tina runs a business creating medical supplies for surgeries. Her team develops a new tool for assisting in heart surgery. She spends $42,000 on getting it patented. She receives a 14-year patent, but she only expects the technology to be used for about 7 years before a newer technology comes along to replace it.

Answer to Question 2:

To record receiving the patent:

Patents  42,000
Cash  42,000

To record amortization expense each year:

Amortization Expense  6,000
Accumulated Amortization  6,000