EXERCISES

Ex. 9–1

a. New printing press: 1, 2, 3, 4, 5
b. Used printing press: 7, 8, 9, 10

Ex. 9–2

a. Yes. All expenditures incurred for the purpose of making the land suitable for its intended use should be debited to the land account.
b. No. Land is not depreciated.

Ex. 9–3

Initial cost of land ($25,000 + $300,000) ....................   $325,000
Plus: Legal fees ..........................................................  $ 2,100
Delinquent taxes ..................................................  14,000
Demolition of building ..........................................  9,000  25,100

$350,100
Less salvage of materials ..............................................  3,500
Cost of land .................................................................   $346,600

Ex. 9–4

Capital expenditures: 1, 2, 3, 4, 5, 8, 10
Revenue expenditures: 6, 7, 9

Ex. 9–5

Capital expenditures: 1, 2, 3, 4, 6, 10
Revenue expenditures: 5, 7, 8, 9
Ex. 9–6

Feb. 4  Accumulated Depreciation—Delivery Truck.....  4,300
       Cash.................................................................  4,300
May 6  Delivery Truck .....................................................  1,900
       Cash.................................................................  1,900
Sept. 10  Repairs and Maintenance Expense..............  60
       Cash.................................................................  60

Ex. 9–7

a.  No. The $7,500,000 represents the original cost of the equipment. Its re-
placement cost, which may be more or less than $7,500,000, is not reported in
the financial statements.

b.  No. The $6,175,000 is the accumulation of the past depreciation charges on
the equipment. The recognition of depreciation expense has no relationship
to the cash account or accumulation of cash funds.

Ex. 9–8

(a) 25% (1/4), (b) 12.5% (1/8), (c) 10% (1/10), (d) 6.25% (1/16), (e) 4% (1/25), (f) 2.5%
(1/40), (g) 2% (1/50)

Ex. 9–9

$6,625 [($120,000 – $14,000)/16]

Ex. 9–10

$185,000 – $37,000 = $3.70 depreciation per hour
     40,000 hours

140 hours at $3.70 = $518 depreciation for February
Ex. 9–11

a. Depreciation per Rate per Mile:

Truck #1  \( \frac{($75,000 - $15,000)}{200,000} = $0.30 \)
Truck #2  \( \frac{($38,000 - $3,000)}{200,000} = $0.175 \)
Truck #3  \( \frac{($72,900 - $9,900)}{300,000} = $0.21 \)
Truck #4  \( \frac{($90,000 - $20,000)}{250,000} = $0.28 \)

<table>
<thead>
<tr>
<th>Truck No.</th>
<th>Rate per Mile</th>
<th>Miles Operated</th>
<th>Credit to Accumulated Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30.0 cents</td>
<td>19,500</td>
<td>$5,850</td>
</tr>
<tr>
<td>2</td>
<td>17.5</td>
<td>36,000</td>
<td>6,300</td>
</tr>
<tr>
<td>3</td>
<td>21.0</td>
<td>25,000</td>
<td>2,100*</td>
</tr>
<tr>
<td>4</td>
<td>28.0</td>
<td>26,000</td>
<td>7,280</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$21,530</td>
</tr>
</tbody>
</table>

*Mileage depreciation of $5,250 (21 cents \times 25,000) is limited to $2,100, which reduces the book value of the truck to $9,900, its residual value.

b. Depreciation Expense—Trucks................. 21,530
Accumulated Depreciation—Trucks............... 21,530
Truck depreciation.

Ex. 9–12

First Year

a. 4% of $80,000 = $3,200

or

\( \frac{($80,000/25)}{25} = $3,200 \)

b. 8% of $80,000 = $6,400

Second Year

a. 4% of $80,000 = $3,200

or

\( \frac{($80,000/25)}{25} = $3,200 \)

b. 8% of ($80,000 – $6,400) = $5,888

Ex. 9–13

a. 6 1/4\% of ($344,000 – $50,000) = $18,375 or \[\frac{($344,000 – $50,000)}{16}\]

b. Year 1: 12.5\% of $344,000 = $43,000
Year 2: 12.5\% of ($344,000 – $43,000) = $37,625
Ex. 9–14

a. Year 1: \(9/12 \times \frac{[($64,000 - $4,000)/8]}{} = $5,625\)
   Year 2: \(\frac{($64,000 - $4,000)}{8} = $7,500\)

b. Year 1: \(9/12 \times 25\% \text{ of } $64,000 = $12,000\)
   Year 2: \(25\% \text{ of } (\frac{($64,000 - $12,000)}{}) = $13,000\)

Ex. 9–15

a. $16,250 \([($900,000 - $250,000)/40]\)

b. $510,000 \([$900,000 - (16,250 \times 24 \text{ yrs.})]\)

c. $30,000 \([($510,000 - $240,000)/9 \text{ yrs.}]\)

Ex. 9–16

a. June 30 Carpet ............................................................ 15,000
   Cash .........................................................   15,000

b. Dec. 31 Depreciation Expense .................................. 625
   Accumulated Depreciation .....................   625
   Carpet depreciation
   \([($15,000/12 \text{ years}) \times 1/2]\).

Ex. 9–17

a. Cost of equipment .......................................................... $380,000
   Accumulated depreciation at December 31, 2012
   (4 years at $21,250\% \text{ per year}) ................................................. 85,000
   Book value at December 31, 2010 ........................................... $295,000
   \(*($380,000 - $40,000)/16 = $21,250\)

b. (1) Depreciation Expense—Equipment ...................... 10,625
   Accumulated Depreciation—Equipment ........ 10,625
   Truck depreciation ($21,250 \times 6/12 = 10,625).

(2) Cash ......................................................................... 270,000
   Accumulated Depreciation—Equipment............ 95,625\* 
   Loss on Sale of Equipment ............................... 14,375
   Equipment .......................................................... 380,000
   \(*($85,000 + 10,625 = $95,625)\)
Ex. 9–18

a. 2009 depreciation expense: $40,000 \([\frac{($425,000 - $65,000)}{9}]\)
   2010 depreciation expense: $40,000
   2011 depreciation expense: $40,000
b. $305,000 \([\frac{($425,000 - (40,000 \times 3))}{9}]\)

c. Cash ................................................................................ 290,000
   Accumulated Depreciation—Equipment ......................... 120,000
   Loss on Disposal of Fixed Assets .................................. 15,000
   Equipment ...................................................................... 425,000

d. Cash ................................................................................ 310,000
   Accumulated Depreciation—Equipment ......................... 120,000
   Equipment ...................................................................... 425,000
   Gain on Sale of Equipment ............................................ 5,000

Ex. 9–19

a. $15,000,000/120,000,000 tons = $0.125 depletion per ton
24,000,000 \times $0.125 = $3,000,000 depletion expense
b. Depletion Expense ........................................................ 3,000,000
   Accumulated Depletion .............................................. 3,000,000
   Depletion of mineral deposit.

Ex. 9–20

a. \((300,000/12) + (72,000/9)\) = $33,000 total patent expense
b. Amortization Expense—Patents ................................. 33,000
   Patents ...................................................................... 33,000
   Amortized patent rights \((25,000 + 8,000)\).
Ex. 9–21

a. Property, Plant, and Equipment (in millions):

<table>
<thead>
<tr>
<th></th>
<th>Current Year</th>
<th>Preceding Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land and buildings</td>
<td>$ 955</td>
<td>$ 810</td>
</tr>
<tr>
<td>Machinery, equipment, and internal-use software</td>
<td>1,932</td>
<td>1,491</td>
</tr>
<tr>
<td>Office furniture and equipment</td>
<td>115</td>
<td>122</td>
</tr>
<tr>
<td>Other fixed assets related to leases</td>
<td>1,665</td>
<td>1,324</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$4,667</strong></td>
<td><strong>$3,747</strong></td>
</tr>
<tr>
<td>Less accumulated depreciation</td>
<td>1,713</td>
<td>1,292</td>
</tr>
<tr>
<td>Book value</td>
<td><strong>$2,954</strong></td>
<td><strong>$2,455</strong></td>
</tr>
</tbody>
</table>

A comparison of the book values of the current and preceding years indicates that they increased. A comparison of the total cost and accumulated depreciation reveals that Apple purchased $920 million ($4,667 – $3,747) of additional fixed assets, which was offset by the additional depreciation expense of $421 million ($1,713 – $1,292) taken during the current year.

b. The book value of fixed assets should normally increase during the year. Although additional depreciation expense will reduce the book value, most companies invest in new assets in an amount that is at least equal to the depreciation expense. However, during periods of economic downturn, companies purchase fewer fixed assets, and the book value of their fixed assets may decline.

Ex. 9–22

1. Fixed assets should be reported at cost and not replacement cost.

2. Land does not depreciate.

3. Patents and goodwill are intangible assets that should be listed in a separate section following the Fixed Assets section. Patents should be reported at their net book values (cost less amortization to date). Goodwill should not be amortized, but should be only written down upon impairment.
Ex. 9–23

a. Fixed Asset Turnover Ratio = \( \frac{\text{Revenue}}{\text{Average Book Value of Fixed Assets}} \)

\[
\text{Fixed Asset Turnover Ratio} = \frac{107,808}{(91,466 + 86,546)/2}
\]

Fixed Asset Turnover Ratio = 1.21

b. Verizon earns $1.21 revenue for every dollar of fixed assets. This is a low fixed asset turnover ratio, reflecting the high fixed asset intensity in a telecommunications company. The industry average fixed asset turnover ratio is slightly lower at 1.10. Thus, Verizon is using its fixed assets slightly more efficiently than the industry as a whole.

Ex. 9–24

a. Best Buy: 12.04 ($45,015/$3,740)
   RadioShack: 13.54 ($4,225/$312)

b. RadioShack's fixed asset turnover ratio of 13.54 is higher than Best Buy's fixed asset turnover ratio of 12.04. Thus, RadioShack is generating $1.50 ($13.54 – $12.04) more revenue for each dollar of fixed assets than is Best Buy. On this basis, RadioShack is managing its fixed assets slightly more efficiently than is Best Buy.

Appendix Ex. 9–25

a. Price (fair market value) of new equipment ......................... $400,000
   Trade-in allowance of old equipment ................................. 175,000
   Cash paid on the date of exchange ................................. $225,000

b. Price (fair market value) of new equipment ............... $400,000
   Less assets given up in exchange:
   Book value of old equipment......................................... $160,000
   Cash paid on the exchange.............................................. 225,000
   Gain on exchange of equipment................................. $ 15,000

385,000