Agasse Industries began construction of a new facility and took out a $1,500,000, 8% construction loan on April 1, 2021. Agasse made payments to the general contractor of $481,000 on April 1, $981,000 on August 31, and $581,000 on December 31.  
   
**Required:**  
Compute the amount of interest that Agasse would capitalize in 2021. **(Do not round intermediate calculations.)**

|  |
| --- |
|  |
|  | |  |  | | --- | --- | | Amount of interest | $55,020 | |

**xplanation**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Expenditures | | | | | | | | |
| April 1 | $ | 481,000 |  | × | 9/9 | = | $ | 481,000 |  |
| August 31 |  | 981,000 |  | × | 4/9 | = |  | 436,000 |  |
| December 31 |  | 581,000 |  | × | 0/9 | = |  | 0 |  |
| Average accumulated expenditures for 2021 |  |  |  |  |  |  | $ | 917,000 |  |
|  |  |  |  |  |  |  |  |  |  |
| Interest capitalized in 2021: $917,000 × 8% × 9/12 | $ | 55,020 |  |  |  |  |  |  |  |
|  | | | | | | | | | |

Grab Manufacturing Co. purchased a 10-ton draw press at a cost of $184,000 with terms of 4/15, n/45. Payment was made within the discount period. Shipping costs were $3,700, which included $200 for insurance in transit. Installation costs totaled $12,300, which included $4,000 for taking out a section of a wall and rebuilding it because the press was too large for the doorway. The capitalized cost of the 10-ton draw press is:

Multiple Choice

Top of Form

* 

$190,640.

* 

$192,640.

Correct

* 

$197,640.

* 

$196,140.

Bottom of Form

## Explanation

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Purchase price ($184,000 × 96%) | $ | 176,640 |  |
| Shipping costs |  | 3,700 |  |
| Installation costs |  | 12,300 |  |
| Total cost of equipment | $ | 192,640 |  |
|  | | | |

Horton Stores exchanged land and cash of $4,800 for similar land. The book value and the fair value of the land were $89,900 and $101,600, respectively.  
   
Assuming that the exchange *has* commercial substance, Horton would record land—new and a gain/(loss) on exchange of assets in the amounts of:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Land | | |  | Gain/(loss) | | |
| a. | $ | 106,400 |  |  | $ | 0 |  |
| b. | $ | 106,400 |  |  | $ | 11,700 |  |
| c. | $ | 94,700 |  |  | $ | 0 |  |
| d. | $ | 94,700 |  |  | $ | 11,700 |  |
|  | | | | | | | |

Multiple Choice

Top of Form

* 

Option A

* 

Option B

Correct

* 

Option C

* 

Option D

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Land—new (FV of old land + $4,800) | 106,400 |  |
| Cash |  | 4,800 |
| Gain on exchange of assets ($101,600 − $89,900) |  | 11,700 |
| Land—old (book value) |  | 89,900 |
|  | | |

Pensacola Inc. exchanged old equipment for new equipment in two exchange transactions. Each transaction has commercial substance.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Old Equipment | | | | | | |  | Cash | | |
|  | Book Value | | |  | Fair Value | | |  | Received | | |
| Equipment A | $ | 74,700 |  |  | $ | 80,800 |  |  | $ | 11,400 |  |
| Equipment B | $ | 61,900 |  |  | $ | 55,400 |  |  | $ | 9,700 |  |
|  | | | | | | | | | | | |

For Equipment A, Pensacola would record the new equipment at:

Multiple Choice

Top of Form

* 

$69,400.

Correct

* 

$70,900.

* 

$73,650.

* 

$56,900.

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment—new ($80,800 − $11,400) | 69,400 |  |
| Cash | 11,400 |  |
| Equipment—old (book value) |  | 74,700 |
| Gain on exchange of assets |  | 6,100 |
|  | | |

Below is information relative to an exchange of similar assets by Grand Forks Corp. Assume the exchange has commercial substance.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Old Equipment | | | | | | |  | Cash | | |
|  | Book Value | | |  | Fair Value | | |  | Paid | | |
| Case A | $ | 50,900 |  |  | $ | 60,800 |  |  | $ | 14,900 |  |
| Case B | $ | 40,800 |  |  | $ | 35,200 |  |  | $ | 7,700 |  |
|  | | | | | | | | | | | |

In Case A, Grand Forks would record the new equipment at:

Multiple Choice

Top of Form

* 

$60,800.

* 

$50,900.

* 

$75,700.

Correct

* 

$65,800.

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment—new ($60,800 + $14,900) | 75,700 |  |
| Cash |  | 14,900 |
| Equipment—old (book value) |  | 50,900 |
| Gain on exchange of assets |  | 9,900 |
|  | | |

Juliana Corporation purchased all of the outstanding stock of Caldwell Inc., paying $4,200,000 cash. Juliana assumed all of the liabilities of Caldwell. Book values and fair values of acquired assets and liabilities were:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Book Value | | |  | Fair Value | | |
| Current assets (net) | $ | 300,000 |  |  | $ | 600,000 |  |
| Property, plant, & equip. (net) |  | 1,620,000 |  |  |  | 2,230,000 |  |
| Liabilities |  | 470,000 |  |  |  | 740,000 |  |
|  | | | | | | | |

Juliana would record goodwill of:

Multiple Choice

Top of Form

* 

$2,690,000.

* 

$270,000.

* 

$6,890,000.

* 

$2,110,000.

Correct

Bottom of Form

**Explanation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
| Consideration given |  |  |  |  | $ | 4,200,000 |  |  |
| Less: Fair value of net assets |  |  |  |  |  |  |  |  |
| Assets ($600,000 + $2,230,000) | $ | 2,830,000 |  |  |  |  |  |  |
| Less: Liabilities assumed |  | (740,000 | ) |  |  | (2,090,000 | ) |  |
| Goodwill |  |  |  |  | $ | 2,110,000 |  |  |
|  | | | | | | | | |

Alamos Co. exchanged equipment and $18,500 cash for similar equipment. The book value and the fair value of the old equipment were $80,500 and $91,300, respectively.  
   
Assuming that the exchange *has* commercial substance, Alamos would record a gain/(loss) of:

Multiple Choice

Top of Form

* 

$0.

* 

$29,300.

* 

$10,800.

Correct

* 

$(10,800).

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment—new (FV of old + $18,500) | 109,800 |  |
| Cash |  | 18,500 |
| Equipment—old (book value) |  | 80,500 |
| Gain on exchange of assets ($91,300 – $80,500) |  | 10,800 |
|  | | |

On August 1, 2021, Reliable Software began developing a software program to allow individuals to customize their investment portfolios. Technological feasibility was established on January 31, 2022, and the program was available for release on March 31, 2022. Development costs were incurred as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| August 1 through December 31, 2021 | $ | 5,800,000 |  |
| January 1 through January 31, 2022 |  | 1,150,000 |  |
| February 1 through March 31, 2022 |  | 1,550,000 |  |
|  | | | |

Reliable expects a useful life of five years for the software and total revenues of $7,500,000 during that time. During 2022, revenue of $1,500,000 was recognized.  
   
**Required:**  
Prepare the journal entries to record the development costs in 2021 and 2022. **(If no entry is required for a transaction/event, select "No journal entry required" in the first account field.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Date** | **General Journal** | **Debit** | **Credit** |
| 1 | 2021 | Research and development expense | 5,800,000 |  |
|  |  | Cash |  | 5,800,000 |
|  |  |  |  |  |
| 2 | 2022 | Research and development expense | 1,150,000 |  |
|  |  | Software development costs | 1,550,000 |  |
|  |  | Cash |  | 2,700,000 |

During 2021, the Longhorn Oil Company incurred $5,800,000 in exploration costs for each of 20 oil wells drilled in 2021 in west Texas. Of the 20 wells drilled, 13 were dry holes. Longhorn uses the successful efforts method of accounting. Assuming that none of the oil found is depleted in 2021, what oil exploration expense would Longhorn charge for this activity in its 2021 income statement?

Multiple Choice

Top of Form

* 

$0.

* 

$40.6 million.

* 

$75.4 million.

Correct

* 

$116.0 million.

Bottom of Form

## Explanation

Expense the dry holes − $116 million × (13/20) = $75.4 million

Mad Hatter Enterprises purchased new equipment for $368,000, terms f.o.b. shipping point. Other costs connected with the purchase were as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| State sales tax | $ | 29,500 |  |
| Freight costs |  | 5,900 |  |
| Insurance while in transit |  | 830 |  |
| Insurance after equipment placed in service |  | 1,230 |  |
| Installation costs |  | 2,150 |  |
| Insurance for the first year of operations |  | 2,550 |  |
| Testing |  | 730 |  |
|  | | | |

**Required:**  
Determine the capitalized cost of the equipment.

|  |
| --- |
|  |
|  | |  |  | | --- | --- | | Cost of equipment | $407,110 | |

## Explanation

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Purchase price | $ | 368,000 |  |
| State sales tax |  | 29,500 |  |
| Freight costs |  | 5,900 |  |
| Insurance while in transit |  | 830 |  |
| Installation costs |  | 2,150 |  |
| Testing |  | 730 |  |
| Total cost of equipment | $ | 407,110 |  |
|  | | | |

Montgomery Industries spent $640,000 in 2020 on a construction project to build a library. Montgomery also capitalized $32,000 of interest on the project in 2020. Montgomery financed 100% of the construction with a 12% construction loan. The project was completed on September 30, 2021. Additional expenditures in 2021 were as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Feb. 28 | $ | 93,600 |  |
| Apr. 30 |  | 183,600 |  |
| Jul. 1 |  | 39,600 |  |
| Sept. 30 |  | 67,600 |  |
|  | | | |

**Required:**  
Determine the completed cost of the library. **(Do not round intermediate calculations.)**

|  |
| --- |
|  |
|  | |  |  | | --- | --- | | Completed cost of the library | $1,133,800 | |

rev: 01\_25\_2020\_QC\_CS-197070

## Explanation

Expenditures

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
| Accumulated expenditures Dec. 31, 2020 | $ | 672,000 |  | × | 9/9 | = | $ | 672,000 |  |
| Feb. 28, 2021 |  | 93,600 |  | × | 7/9 | = |  | 72,800 |  |
| Apr. 30, 2021 |  | 183,600 |  | × | 5/9 | = |  | 102,000 |  |
| Jul. 1, 2021 |  | 39,600 |  | × | 3/9 | = |  | 13,200 |  |
| Sept. 30, 2021 |  | 67,600 |  | × | 0/9 | = |  | 0 |  |
| Average accumulated expenditures for 2021 |  |  |  |  |  |  | $ | 860,000 |  |
|  |  |  |  |  |  |  |  |  |  |
| Interest capitalized in 2021 ($860,000 × 12% × 9/12) |  | 77,400 |  |  |  |  |  |  |  |
| Completed cost of the library | $ | 1,133,800 |  |  |  |  |  |  |  |
|  | | | | | | | | | |

Alamos Co. exchanged equipment and $17,500 cash for similar equipment. The book value and the fair value of the old equipment were $81,200 and $91,300, respectively.  
   
Assuming that the exchange *lacks* commercial substance, Alamos would record a gain/(loss) on exchange of assets in the amount of:

Multiple Choice

Top of Form

* 

$10,100.

* 

$(10,100).

* 

$0.

Correct

* 

$27,600.

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment—new (BV of old + $17,500) | 98,700 |  |
| Cash |  | 17,500 |
| Equipment—old (book value) |  | 81,200 |
|  | | |

P. Chang & Co. exchanged land and $8,700 cash for equipment. The book value and the fair value of the land were $106,600 and $89,500, respectively.  
   
Assuming that the exchange *has* commercial substance, Chang would record equipment and a gain/(loss) on exchange of assets in the amounts of:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Equipment | | |  | Gain/(loss) | | |
| a. | $ | 98,200 |  |  | $ | (17,100 | ) |
| b. | $ | 89,500 |  |  | $ | (25,800 | ) |
| c. | $ | 106,600 |  |  | $ | 17,100 |  |
| d. | $ | 106,600 |  |  | $ | (8,700 | ) |
|  | | | | | | | |

Multiple Choice

Top of Form

* 

Option A

Correct

* 

Option B

* 

Option C

* 

Option D

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment (FV of land + $8,700) | 98,200 |  |
| Loss on exchange of assets ($106,600 − $89,500) | 17,100 |  |
| Cash |  | 8,700 |
| Land (book value) |  | 106,600 |
|  | | |

Schefter Mining operates a copper mine in Wyoming. Acquisition, exploration, and development costs totaled $7.9 million. Extraction activities began on July 1, 2021. After the copper is extracted in approximately six years, Schefter is obligated to restore the land to its original condition, including constructing a park. The company’s controller has provided the following three cash flow possibilities for the restoration costs:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Cash Flow | | |  | Probability | | |  |
| 1. | $ | 670,000 |  |  |  | 25 | % |  |
| 2. |  | 770,000 |  |  |  | 25 | % |  |
| 3. |  | 870,000 |  |  |  | 50 | % |  |
|  | | | | | | | | |

The company’s credit-adjusted, risk-free rate of interest is 6%, and its fiscal year ends on December 31. ([FV of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_1.png), [PV of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_2.png), [FVA of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_3.png), [PVA of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_4.png), [FVAD of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_5.png) and [PVAD of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_6.png)) **(Use appropriate factor(s) from the tables provided. Round other intermediate calculations to the nearest whole dollar. Enter your answers in whole dollars.)**  
   
**Required:**  
**1.** What is the initial cost of the copper mine?  
**2.** How much accretion expense will Schefter report in its 2021 income statement?  
**3.** What is the book value of the asset retirement obligation that Schefter will report in its 2021 balance sheet?  
**4.** Assume that actual restoration costs incurred in 2027 totaled $837,000. What amount of gain or loss will Schefter recognize on retirement of the liability?

|  |
| --- |
|  |
|  | |  |  |  | | --- | --- | --- | |  |  |  | | 1. | Cost of copper mine | $8,460,443 | | 2. | Accretion expense | $16,813 | | 3. | Book value | $577,256 | | 4. | Loss | $(42,000) | |

## Explanation

**1.**  
Cost of copper mine:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Acquisition, exploration, and development | $ | 7,900,000 |  |  |
| Restoration costs |  | 560,443 | † |  |
|  | $ | 8,460,443 |  |  |
|  | | | | |

†

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
| $ | 670,000 | × | 25 | % | = | $ | 167,500 |  |
|  | 770,000 | × | 25 | % | = |  | 192,500 |  |
|  | 870,000 | × | 50 | % | = |  | 435,000 |  |
|  |  |  |  |  |  | $ | 795,000 |  |
|  | | | | | | | | |

$795,000 × 0.70496\* = $560,443  
\*Present value of $1, *n* = 6, *i*= 6% (from PV of $1)  
   
**2.**  
2021:  
$560,443 × 6% × 1/2 year = $16,813 = accretion expense  
   
**3.**  
$560,443 + $16,813 = $577,256 = asset retirement obligation at the end of 2021.  
   
**4.**  
Schefter will recognize a loss of $42,000 ($837,000 − $795,000).

Horton Stores exchanged land and cash of $5,400 for similar land. The book value and the fair value of the land were $89,600 and $101,600, respectively.  
   
Assuming that the exchange *lacks* commercial substance, Horton would record land—new and a gain/(loss) on exchange of assets in the amounts of:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Land | | |  | Gain/(loss) | | |
| a. | $ | 107,000 |  |  | $ | 0 |  |
| b. | $ | 107,000 |  |  | $ | 12,000 |  |
| c. | $ | 95,000 |  |  | $ | 0 |  |
| d. | $ | 95,000 |  |  | $ | 12,000 |  |
|  | | | | | | | |

Multiple Choice

Top of Form

* 

Option A

* 

Option B

* 

Option C

Correct

* 

Option D

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Land—new (BV of old land + $5,400) | 95,000 |  |
| Cash |  | 5,400 |
| Land—old (book value) |  | 89,600 |
|  | | |

The balance sheets of Davidson Corporation reported net fixed assets of $324,000 at the end of 2021. The fixed-asset turnover ratio for 2021 was 4.0, and sales for the year totaled $1,520,000. Net fixed assets at the end of 2020 were:

Multiple Choice

Top of Form

* 

$492,000.

* 

$380,000.

* 

$436,000.

Correct

* 

None of these answer choices are correct.

Bottom of Form

## Explanation

$1,520,000 ÷ Average fixed assets = 4.0  
  
Average fixed assets = $380,000, therefore net fixed assets at the end of 2020 must be $436,000 [($324,000 + x) ÷ 2] = $380,000; $324,000 + x = $760,000; x = $436,000

Hawkins Corporation began construction of a motel on March 31, 2021. The project was completed on April 30, 2022. No new loans were required to fund construction. Hawkins does have the following two interest-bearing liabilities that were outstanding throughout the construction period:  
   
$4,100,000, 6% note  
$16,740,000, 10% bonds  
   
Construction expenditures incurred were as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| March 31, 2021 | $ | 4,090,000 |  |
| June 30, 2021 |  | 6,090,000 |  |
| November 30, 2021 |  | 1,818,000 |  |
| February 28, 2022 |  | 3,090,000 |  |
|  | | | |

The company’s fiscal year-end is December 31.  
   
**Required:**  
Calculate the amount of interest capitalized for 2021 and 2022. **(Round weighted average interest rate to 2 decimal places and final answers to the nearest whole dollar.)**

|  |
| --- |
|  |
|  | |  |  |  | | --- | --- | --- | |  | **2021** | **2022** | | Amount of interest | $576,914 | $433,481 | |

## Explanation

Average accumulated expenditures for 2021:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | | | | | |
| March 31, 2021 | $ | 4,090,000 |  | × | 9/9 | = | $ | 4,090,000 |  |
| June 30, 2021 |  | 6,090,000 |  | × | 6/9 | = |  | 4,060,000 |  |
| November 30, 2021 |  | 1,818,000 |  | × | 1/9 | = |  | 202,000 |  |
|  | $ | 11,998,000 |  |  |  |  | $ | 8,352,000 |  |
| Interest capitalized in 2021: |  |  |  |  |  |  |  |  |  |
| $8,352,000 × 9.21%\* × 9/12 | $ | 576,914 |  |  |  |  |  |  |  |
|  | | | | | | | | | |

\* Weighted-average rate of all debt:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $ | 4,100,000 |  | × | 6 | % |  | = |  | $ | 246,000 |  |
|  |  | 16,740,000 |  | × | 10 | % |  | = |  |  | 1,674,000 |  |
|  | $ | 20,840,000 |  |  |  |  |  |  |  | $ | 1,920,000 |  |
|  | | | | | | | | | | | | |

|  |  |  |
| --- | --- | --- |
| $1,920,000 | = | 9.21% |
| $20,840,000 |

Average accumulated expenditures for 2022:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | | | | | |
| January 1, 2022 ($11,998,000 + $576,914) | $ | 12,574,914 |  | × | 4/4 | = | $ | 12,574,914 |  |
| February 28, 2022 |  | 3,090,000 |  | × | 2/4 | = |  | 1,545,000 |  |
|  |  |  |  |  |  |  | $ | 14,119,914 |  |
| Interest capitalized in 2022: |  |  |  |  |  |  |  |  |  |
| $14,119,914 × 9.21%\* × 4/12 | $ | 433,481 |  |  |  |  |  |  |  |
|  | | | | | | | | | |

On January 1, 2021, Dreamworld Co. began construction of a new warehouse. The building was finished and ready for use on September 30, 2022. Expenditures on the project were as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| January 1, 2021 | $ | 340,000 |  |
| September 1, 2021 | $ | 510,000 |  |
| December 31, 2021 | $ | 510,000 |  |
| March 31, 2022 | $ | 510,000 |  |
| September 30, 2022 | $ | 340,000 |  |
|  | | | |

Dreamworld had $7,000,000 in 14% bonds outstanding through both years.  
   
The average accumulated expenditures for 2022 by the end of the construction period was:

Multiple Choice

Top of Form

* 

$1,771,400.

Correct

* 

$1,431,400.

* 

$1,105,000.

* 

$2,210,000.

Bottom of Form

**Explanation**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
| January 1, 2021 | $ | 340,000 |  | × | 12/12 | = | $ | 340,000 |  |  |
| September 1, 2021 |  | 510,000 |  | × | 4/12 | = |  | 170,000 |  |  |
| December 31, 2021 |  | 510,000 |  | × | 0/12 | = |  | 0 |  |  |
|  | $ | 1,360,000 |  |  |  |  | $ | 510,000 |  |  |
|  | | | | | | | | | | |

$510,000 × 14% = $71,400

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
| Accumulated expenditures at 12/31/2021 | $ | 1,431,400 |  | × | 9/9 | = | $ | 1,431,400 |  |  |
| March 31, 2022 |  | 510,000 |  | × | 6/9 | = |  | 340,000 |  |  |
| September 30, 2022 |  | 340,000 |  | × | 0/9 | = |  | 0 |  |  |
|  | $ | 2,281,400 |  |  |  |  | $ | 1,771,400 |  |  |
|  | | | | | | | | | | |
| During 2021, Prospect Oil Corporation incurred $4,200,000 in exploration costs for each of 20 oil wells drilled in 2021. Of the 20 wells drilled, 12 were dry holes. Prospect uses the successful efforts method of accounting. Assuming that Prospect depletes 25% of the oil discovered in 2021, what amount of these exploration costs would remain in its 12/31/2021 balance sheet?  Multiple Choice  Top of Form      $25.20 million.  Correct      $19.60 million.      $33.60 million.      $40.40 million.  Bottom of Form Explanation Capitalize the wells that are not dry holes: 8 × $4.2 million = $33.6 million. Of this, 25% is depleted in 2021 and the rest remains on the balance sheet.   Therefore, 75% of $33.6 million remains = $25.20 million.  AstroTech Semiconductor incurred the following costs in 2021 related to a new product design:   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | | Research for new semiconductor design | $ | 4,220,000 |  | | Development of the new product |  | 956,000 |  | | Legal and filing fees for a patent for the new design |  | 120,000 |  | | Total | $ | 5,296,000 |  | |  | | | |   The development costs were incurred after technological and commercial feasibility was established and after the future economic benefits were deemed probable. The project was successfully completed, and the new product was patented before the end of the 2021 fiscal year.  **Required:** **1.** Calculate the amount of research and development expense (R&D) AstroTech should report in its 2021 U.S. GAAP income statement related to this project. **2.** Repeat Requirement 1 assuming that AstroTech prepares its financial statements according to International Financial Reporting Standards (IFRS).   |  | | --- | |  | |  | |  |  |  | | --- | --- | --- | |  |  |  | | 1. | Research and development expense under U.S. GAAP | $5,176,000 | | 2. | Research and development expense under IFRS | $4,220,000 | |    Explanation **1.** According to U.S. GAAP, the following costs would be expensed as R&D:   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | | Research for new semiconductor design | $ | 4,220,000 |  | | Development of the new product |  | 956,000 |  | | Total | $ | 5,176,000 |  | |  | | | |   The legal and filing fees are capitalized as an intangible asset.  **2.** According to IFRS, only the $4,220,000 in research costs would be expensed as R&D. Both the development costs incurred after feasibility is established and the legal and filing fees are capitalized as intangible assets. | | | | | | | | | | |

On January 1, 2021, Dreamworld Co. began construction of a new warehouse. The building was finished and ready for use on September 30, 2022. Expenditures on the project were as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| January 1, 2021 | $ | 319,000 |  |
| September 1, 2021 | $ | 468,000 |  |
| December 31, 2021 | $ | 468,000 |  |
| March 31, 2022 | $ | 468,000 |  |
| September 30, 2022 | $ | 319,000 |  |
|  | | | |

Dreamworld had $5,600,000 in 12% bonds outstanding through both years.  
   
What was the final cost of Dreamworld's warehouse?

Multiple Choice

Top of Form

* 

$1,312,000.

* 

$2,256,440.

* 

$2,042,000.

* 

$2,245,160.

Correct

Bottom of Form

**Explanation**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
| January 1, 2021 | $ | 319,000 |  | × | 12/12 | = | $ | 319,000 |  |  |
| September 1, 2021 |  | 468,000 |  | × | 4/12 | = |  | 156,000 |  |  |
| December 31, 2021 |  | 468,000 |  | × | 0/12 | = |  | 0 |  |  |
|  | $ | 1,255,000 |  |  |  |  | $ | 475,000 |  |  |
|  | | | | | | | | | | |

$475,000 × 12% = $57,000

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
| Accumulated expenditures at 12/31/2021 | $ | 1,312,000 |  | × | 9/9 | = | $ | 1,312,000 |  |  |
| March 31, 2022 |  | 468,000 |  | × | 6/9 | = |  | 312,000 |  |  |
| September 30, 2022 |  | 319,000 |  | × | 0/9 | = |  | 0 |  |  |
|  | $ | 2,099,000 |  |  |  |  | $ | 1,624,000 |  |  |
|  | | | | | | | | | | |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Accumulated expenditures at 9/30/2022 before 2022 interest | $ | 2,099,000 |  |
| 2022 interest capitalized $1,624,000 × 12% × 9/12 |  | 146,160 |  |
| Total capitalized cost | $ | 2,245,160 |  |
|  | | | |

Vijay Inc. purchased a three-acre tract of land for a building site for $270,000. On the land was a building with an appraised value of $127,000. The company demolished the old building at a cost of $12,600, but was able to sell scrap from the building for $1,670. The cost of title insurance was $990 and attorney fees for reviewing the contract were $570. Property taxes paid were $3,400, of which $210 covered the period subsequent to the purchase date. The capitalized cost of the land is:

Multiple Choice

Top of Form

* 

$287,560.

* 

$144,200.

* 

$287,350.

* 

$285,680.

Correct

Bottom of Form

**Explanation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Purchase price | $ | 270,000 |  |  |
| Demolition costs |  | 12,600 |  |  |
| Scrap sold |  | (1,670 | ) |  |
| Title insurance |  | 990 |  |  |
| Legal fees |  | 570 |  |  |
| Property taxes ($3,400 – $210) |  | 3,190 |  |  |
| Total cost of land | $ | 285,680 |  |  |
|  | | | | |

Watson Company purchased assets of Holmes Ltd. at auction for $1,240,000. An independent appraisal of the fair value of the assets acquired is listed below:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Land | $ | 205,500 |  |
| Building |  | 342,500 |  |
| Equipment |  | 548,000 |  |
| Inventories |  | 274,000 |  |
|  | | | |

**Required:**  
Prepare the journal entry to record the purchase of the assets. **(If no entry is required for a transaction/event, select "No journal entry required" in the first account field.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Transaction** | **General Journal** | **Debit** | **Credit** |
| 1 | 1 | Land | 186,000 |  |
|  |  | Building | 310,000 |  |
|  |  | Equipment | 496,000 |  |
|  |  | Inventory | 248,000 |  |
|  |  | Cash |  | 1,240,000 |

## Explanation

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fair Values | | |  | Percent | | |  | Allocated Costs | | |
| Land | $ | 205,500 |  |  |  | 15 | % |  | $ | 186,000 |  |
| Building |  | 342,500 |  |  |  | 25 |  |  |  | 310,000 |  |
| Equipment |  | 548,000 |  |  |  | 40 |  |  |  | 496,000 |  |
| Inventory |  | 274,000 |  |  |  | 20 |  |  |  | 248,000 |  |
|  | $ | 1,370,000 |  |  |  | 100 | % |  | $ | 1,240,000 |  |
|  | | | | | | | | | | | |

Kerry, Inc., exchanged land and cash of $7,300 for equipment. The land had a book value of $48,000 and a fair value of $52,300.  
   
**Required:**  
Prepare the journal entry to record the exchange. Assume the exchange has commercial substance. **(If no entry is required for a transaction/event, select "No journal entry required" in the first account field.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Transaction** | **General Journal** | **Debit** | **Credit** |
| 1 | 1 | Equipment | 59,600 |  |
|  |  | Gain on exchange of assets |  | 4,300 |
|  |  | Cash |  | 7,300 |
|  |  | Land |  | 48,000 |

Lake Incorporated purchased all of the outstanding stock of Huron Company paying $961,000 cash. Lake assumed all of the liabilities of Huron. Book values and fair values of acquired assets and liabilities were:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Book Value | | |  | Fair Value | | |
| Current assets (net) | $ | 131,100 |  |  | $ | 123,900 |  |
| Property, plant, equip. (net) |  | 620,000 |  |  |  | 769,000 |  |
| Liabilities |  | 151,000 |  |  |  | 175,000 |  |
|  | | | | | | | |

Lake would record goodwill of:

Multiple Choice

Top of Form

* 

$243,100.

Correct

* 

$360,900.

* 

$0.

* 

$68,100.

Bottom of Form

**Explanation**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
| Consideration given |  |  |  |  | $ | 961,000 |  |  |
| Less: Fair value of net assets |  |  |  |  |  |  |  |  |
| Assets ($123,900 + $769,000) | $ | 892,900 |  |  |  |  |  |  |
| Less: Liabilities assumed |  | (175,000 | ) |  |  | (717,900 | ) |  |
| Goodwill |  |  |  |  | $ | 243,100 |  |  |
|  | | | | | | | | |

During the current year, Brewer Company acquired all of the outstanding common stock of Miller Inc. paying $12,900,000 cash. The book values and fair values of Miller's assets and liabilities acquired are listed below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Book Value | | |  | Fair Value | | |
| Accounts receivable | $ | 2,250,000 |  |  | $ | 2,075,000 |  |
| Inventories |  | 3,600,000 |  |  |  | 4,900,000 |  |
| Property, plant, and equipment |  | 9,900,000 |  |  |  | 12,525,000 |  |
| Accounts payable |  | 3,900,000 |  |  |  | 3,900,000 |  |
| Bonds payable |  | 5,400,000 |  |  |  | 5,025,000 |  |
|  | | | | | | | |

**Required:**  
Prepare the journal entry to record the acquisition by Brewer Company. **(If no entry is required for a transaction/event, select "No journal entry required" in the first account field.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Transaction** | **General Journal** | **Debit** | **Credit** |
| 1 | 1 | Accounts receivable | 2,075,000 |  |
|  |  | Inventory | 4,900,000 |  |
|  |  | Property, plant, and equipment | 12,525,000 |  |
|  |  | Goodwill | 2,325,000 |  |
|  |  | Accounts payable |  | 3,900,000 |
|  |  | Bonds payable |  | 5,025,000 |
|  |  | Cash |  | 12,900,000 |

On July 1, 2021, Larkin Co. purchased a $420,000 tract of land that is intended to be the site of a new office complex. Larkin incurred additional costs and realized salvage proceeds during 2021 as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Demolition of existing building on site | $ | 78,000 |  |
| Legal and other fees to close escrow |  | 12,100 |  |
| Proceeds from sale of demolition scrap |  | 9,800 |  |
|  | | | |

What would be the balance in the land account as of December 31, 2021?

Multiple Choice

Top of Form

* 

$510,100.

* 

$498,000.

* 

$420,000.

* 

$500,300.

Correct

Bottom of Form

**Explanation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Purchase price | $ | 420,000 |  |  |
| Demolition costs |  | 78,000 |  |  |
| Legal fees |  | 12,100 |  |  |
| Sale of scrap |  | (9,800 | ) |  |
| Total cost of land | $ | 500,300 |  |  |
|  | | | | |

Beacon Inc. received a gift of land and building in Twin Pines Park as an inducement to relocate. The land and buildings have fair values of $52,000 and $525,000.  
   
**Required:**  
Prepare journal entries to record the above transactions. **(If no entry is required for a transaction/event, select "No journal entry required" in the first account field.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Transaction** | **General Journal** | **Debit** | **Credit** |
| 1 | 1 | Land | 52,000 |  |
|  |  | Building | 525,000 |  |
|  |  | Revenue - donation of asset |  | 577,000 |

Cool Globe Inc. entered into two transactions, as follows:

1. Purchased equipment paying $20,600 at the date of purchase and signing a noninterest-bearing note requiring the balance to be paid in four annual installments of $20,600 on the anniversary date of the contract. Based on Cool Globe's 12% borrowing rate for such transactions, the implicit interest cost is $19,831.
2. Purchased a tract of land in exchange for $10,600 cash that was paid immediately and signed a noninterest-bearing note requiring five $10,600 annual payments. The first annual payment of the note is due in one year. The fair value of the land is $49,000.

**Required:**  
Prepare the journal entries for these transactions. **(If no entry is required for a transaction/event, select "No journal entry required" in the first account field.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Transaction** | **General Journal** | **Debit** | **Credit** |
| 1 | 1 | Equipment | 83,169 |  |
|  |  | Discount on notes payable | 19,831 |  |
|  |  | Notes payable |  | 82,400 |
|  |  | Cash |  | 20,600 |
|  |  |  |  |  |
| 2 | 2 | Land | 49,000 |  |
|  |  | Discount on notes payable | 14,600 |  |
|  |  | Cash |  | 10,600 |
|  |  | Notes payable |  | 53,000 |

On January 1, 2021, Dreamworld Co. began construction of a new warehouse. The building was finished and ready for use on September 30, 2022. Expenditures on the project were as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| January 1, 2021 | $ | 322,000 |  |
| September 1, 2021 | $ | 474,000 |  |
| December 31, 2021 | $ | 474,000 |  |
| March 31, 2022 | $ | 474,000 |  |
| September 30, 2022 | $ | 322,000 |  |
|  | | | |

Dreamworld had $5,800,000 in 12% bonds outstanding through both years.  
   
Dreamworld's average accumulated expenditures for 2021 was:

Multiple Choice

Top of Form

* 

$644,000.

* 

$480,000.

Correct

* 

$322,000.

* 

$560,500.

Bottom of Form

**Explanation**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
| January 1, 2021 | $ | 322,000 |  | × | 12/12 | = | $ | 322,000 |  |  |
| September 1, 2021 |  | 474,000 |  | × | 4/12 | = |  | 158,000 |  |  |
| December 31, 2021 |  | 474,000 |  | × | 0/12 | = |  | 0 |  |  |
|  | $ | 1,270,000 |  |  |  |  | $ | 480,000 |  |  |
|  | | | | | | | | | | |

Bloomington Inc. exchanged land for equipment and $3,700 in cash. The book value and the fair value of the land were $104,500 and $89,100, respectively.  
   
Assuming that the exchange *has* commercial substance, Bloomington would record equipment and a gain/(loss) on exchange of assets in the amounts of:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Equipment | | |  | Gain/(loss) | | |
| a. | $ | 85,400 |  |  | $ | 3,700 |  |
| b. | $ | 104,500 |  |  | $ | (3,700 | ) |
| c. | $ | 85,400 |  |  | $ | (15,400 | ) |
| d. | None of these answer choices are correct. | | | | | | |
|  | | | | | | | |

Multiple Choice

Top of Form

* 

Option A

* 

Option B

* 

Option C

Correct

* 

Option D

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment (FV of land – $3,700) | 85,400 |  |
| Cash | 3,700 |  |
| Loss on exchange of assets ($104,500 − $89,100) | 15,400 |  |
| Land (book value) |  | 104,500 |
|  | | |

Liddy Corp. began constructing a new warehouse for its operations during the current year. In the year Liddy incurred interest of $20,000 on a working capital loan, and interest on a construction loan for the warehouse of $70,000. Interest computed on the average accumulated expenditures for the warehouse construction was $50,000. What amount of interest should Liddy expense for the year?

Multiple Choice

Top of Form

* 

$140,000.

* 

$40,000.

Correct

* 

$90,000.

* 

$20,000.

Bottom of Form

**Explanation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Total interest cost incurred ($20,000 + $70,000) | $ | 90,000 |  |  |
| Interest capitalized |  | (50,000 | ) |  |
| Interest expense | $ | 40,000 |  |  |
|  | | | | |

Pensacola Inc. exchanged old equipment for new equipment in two exchange transactions. Each transaction has commercial substance.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Old Equipment | | | | | | |  | Cash | | |
|  | Book Value | | |  | Fair Value | | |  | Received | | |
| Equipment A | $ | 74,000 |  |  | $ | 81,000 |  |  | $ | 12,100 |  |
| Equipment B | $ | 61,800 |  |  | $ | 55,500 |  |  | $ | 10,300 |  |
|  | | | | | | | | | | | |

For Equipment B, Pensacola would record a gain/(loss) of:

Multiple Choice

Top of Form

* 

$4,800.

* 

$(6,300).

Correct

* 

$(7,300).

* 

None of these answer choices are correct.

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment—new ($55,500 − $10,300) | 45,200 |  |
| Cash | 10,300 |  |
| Loss on exchange of assets | 6,300 |  |
| Equipment—old (book value) |  | 61,800 |
|  | | |

On January 1, 2021, Dreamworld Co. began construction of a new warehouse. The building was finished and ready for use on September 30, 2022. Expenditures on the project were as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| January 1, 2021 | $ | 311,000 |  |
| September 1, 2021 | $ | 453,000 |  |
| December 31, 2021 | $ | 453,000 |  |
| March 31, 2022 | $ | 453,000 |  |
| September 30, 2022 | $ | 311,000 |  |
|  | | | |

Dreamworld had $5,100,000 in 10% bonds outstanding through both years.  
   
Dreamworld's capitalized interest in 2021 was:

Multiple Choice

Top of Form

* 

$46,200.

Correct

* 

$53,975.

* 

$62,200.

* 

$31,100.

Bottom of Form

**Explanation**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
| January 1, 2021 | $ | 311,000 |  | × | 12/12 | = | $ | 311,000 |  |  |
| September 1, 2021 |  | 453,000 |  | × | 4/12 | = |  | 151,000 |  |  |
| December 31, 2021 |  | 453,000 |  | × | 0/12 | = |  | 0 |  |  |
|  | $ | 1,217,000 |  |  |  |  | $ | 462,000 |  |  |
|  | | | | | | | | | | |

$462,000 × 10% = $46,200

Below is information relative to an exchange of similar assets by Grand Forks Corp. Assume the exchange has commercial substance.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Old Equipment | | | | | | |  | Cash | | |
|  | Book Value | | |  | Fair Value | | |  | Paid | | |
| Case A | $ | 49,900 |  |  | $ | 59,000 |  |  | $ | 14,300 |  |
| Case B | $ | 40,500 |  |  | $ | 34,100 |  |  | $ | 8,800 |  |
|  | | | | | | | | | | | |

In Case B, Grand Forks would record a gain/(loss) on exchange of assets in the amount of:

Multiple Choice

Top of Form

* 

$(6,400).

Correct

* 

$2,400.

* 

$(2,400).

* 

$6,400.

Bottom of Form

**Explanation**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Equipment—new ($34,100 + $8,800) | 42,900 |  |
| Loss on exchange of assets ($40,500 − $34,100) | 6,400 |  |
| Cash |  | 8,800 |
| Equipment—old (book value) |  | 40,500 |
|  | | |

Holiday Laboratories purchased a high-speed industrial centrifuge at a cost of $410,000. Shipping costs totaled $19,000. Foundation work to house the centrifuge cost $8,100. An additional water line had to be run to the equipment at a cost of $2,500. Labor and testing costs totaled $5,300. Materials used up in testing cost $2,000. The capitalized cost is:

Multiple Choice

Top of Form

* 

$446,900.

Correct

* 

$445,300.

* 

$429,000.

* 

$439,600.

Bottom of Form

**Explanation**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Purchase price | $ | 410,000 |  |
| Shipping costs |  | 19,000 |  |
| Foundation work |  | 8,100 |  |
| Water line |  | 2,500 |  |
| Labor and testing |  | 5,300 |  |
| Materials used in testing |  | 2,000 |  |
| Total cost of equipment | $ | 446,900 |  |
|  | | | |

Consider each of the transactions below. All of the expenditures were made in cash.

1. The Edison Company spent $24,000 during the year for experimental purposes in connection with the development of a new product.
2. In April, the Marshall Company lost a patent infringement suit and paid the plaintiff $8,000.
3. In March, the Cleanway Laundromat bought equipment. Cleanway paid $18,000 down and signed a noninterest-bearing note requiring the payment of $24,000 in nine months. The cash price for this equipment was $37,000.
4. On June 1, the Jamsen Corporation installed a sprinkler system throughout the building at a cost of $40,000.
5. The Mayer Company, plaintiff, paid $24,000 in legal fees in November, in connection with a successful infringement suit on its patent.
6. The Johnson Company traded its old equipment for new equipment. The new equipment has a fair value of $13,600. The old equipment had an original cost of $13,400 and a book value of $6,600 at the time of the trade. Johnson also paid cash of $10,400 as part of the trade. The exchange has commercial substance.

**Required:**

Prepare journal entries to record each of the above transactions.

"No journal entry required" in the first account field.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Transaction** | **General Journal** | **Debit** | **Credit** |
| 1 | 1 | Research and development expense | 24,000 |  |
|  |  | Cash |  | 24,000 |
|  |  |  |  |  |
| 2 | 2 | Legal fees expense | 8,000 |  |
|  |  | Cash |  | 8,000 |
|  |  |  |  |  |
| 3 | 3 | Equipment | 37,000 |  |
|  |  | Discount on notes payable | 5,000 |  |
|  |  | Cash |  | 18,000 |
|  |  | Notes payable |  | 24,000 |
|  |  |  |  |  |
| 4 | 4 | Building (sprinkler system) | 40,000 |  |
|  |  | Cash |  | 40,000 |
|  |  |  |  |  |
| 5 | 5 | Patent | 24,000 |  |
|  |  | Cash |  | 24,000 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Transaction** | **General Journal** | **Debit** | **Credit** |
| 1 | 1 | Equipment-new | 13,600 |  |
|  |  | Accumulated depreciation | 6,800 |  |
|  |  | Loss on exchange of assets | 3,400 |  |
|  |  | Equipment-old |  | 13,400 |
|  |  | Cash |  | 10,400 |

## Explanation

**6.**  
Equipment-new ($3,200 FV given\* + $10,400 cash paid) = $13,600  
Accumulated depreciation-machine ($13,400 cost – $6,600 BV) = $6,800  
Loss on exchange of assets ($3,200 FV\* – $6,600 BV) = $3,400  
Equipment—old (remove account balance) = $13,400  
  
\*Fair value of old equipment (Fair value of new equipment – Cash given):  
$13,600 – $10,400 = $3,200

Fellingham Corporation purchased equipment on January 1, 2019, for $256,000. The company estimated the equipment would have a useful life of 10 years with a $19,600 residual value. Fellingham uses the straight-line depreciation method. Early in 2021, Fellingham reassessed the equipment's condition and determined that its total useful life would be only six years in total and that it would have no salvage value. How much would Fellingham report as depreciation on this equipment for 2021?

Multiple Choice

Top of Form

* 

$65,180.

* 

$34,787.

* 

$47,280.

* 

$52,180.

Correct

Bottom of Form

## Explanation

This is a change in estimate, so the remaining depreciation will be spread over the remaining useful life.  
   
Accumulated depreciation at 12/31/2020 = 2 × [($256,000 − $19,600) ÷ 10] = $47,280  
Book value at 12/31/2020 = $256,000 − $47,280 = $208,720. The revised life is six years and two have passed, leaving four remaining years.  
Annual depreciation after change in estimate = $208,720 ÷ 4 = $52,180

Jennings Advertising, Inc. reported the following in its December 31, 2021, balance sheet:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Equipment | $ | 540,000 |  |
| Less: Accumulated depreciation—equipment | $ | 406,080 |  |
|  | | | |

In a disclosure note, Jennings indicates that it uses straight-line depreciation over 15 years and estimates salvage value at 6% of cost. What is the average age of the equipment owned by Jennings?

Multiple Choice

Top of Form

* 

12 years.

Correct

* 

2.5 years.

* 

3 years.

* 

12.5 years.

Bottom of Form

**Explanation**

Annual depreciation is ($540,000 − $32,400) ÷ $15 = $33,840  
Accumulated depreciation ÷ Annual depreciation = $406,080 ÷ $33,840 = 12 years

Cutter Enterprises purchased equipment for $69,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $8,700.  
   
Using the double-declining-balance method, depreciation for 2021 and the book value at December 31, 2021, would be:

Multiple Choice

Top of Form

* 

$27,600 and $41,400 respectively.

Correct

* 

$24,120 and $44,880 respectively.

* 

$27,600 and $32,700 respectively.

* 

$24,120 and $39,180 respectively.

Bottom of Form

## Explanation

Depreciation, 2021 = $69,000 × 40% = $27,600  
Book value, 12/31/21 = $69,000 − $27,600 = $41,400

Jung Inc. owns a patent for which it paid $70 million. At the end of 2021, it had accumulated amortization on the patent of $17 million. Due to adverse economic conditions, Jung's management determined that it should assess whether an impairment loss should be recognized for the patent. The estimated undiscounted future cash flows to be provided by the patent total $44 million, and the patent's fair value at that point is $26 million. Under these circumstances, Jung:

Multiple Choice

Top of Form

* 

Would record no impairment loss on the patent.

* 

Would record a $18 million impairment loss on the patent.

* 

Would record a $27 million impairment loss on the patent.

Correct

* 

Would record a $44 million impairment loss on the patent.

Bottom of Form

## Explanation

The patent fails the recoverability test, and the impairment is measured by the difference between its fair value of $26 million and its book value of $53 million ($70 million − $17 million).

Cutter Enterprises purchased equipment for $54,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $6,300.  
   
Using the straight-line method, depreciation for 2021 would be:

Multiple Choice

Top of Form

* 

$9,540.

Correct

* 

$10,800.

* 

$54,000.

* 

None of the other answer choices are correct.

Bottom of Form

## Explanation

($54,000 – $6,300) ÷ 5 = $9,540

Broadway Ltd. purchased equipment on January 1, 2019, for $900,000, estimating a six-year useful life and no residual value. In 2019 and 2020, Broadway depreciated the asset using the straight-line method. In 2021, Broadway changed to sum-of-years'-digits depreciation for this equipment. What depreciation would Broadway record for the year 2021 on this equipment? **(Do not round your depreciation rate.)**

Multiple Choice

Top of Form

* 

$120,000.

* 

$300,000.

* 

$150,000.

* 

$240,000.

Correct

Bottom of Form

## Explanation

The depreciation for 2019 and 2020 was: $900,000 ÷ 6 = $150,000 per year.  
This leaves a book value of $600,000 ($900,000 − $300,000) and four years remain in the asset's life. Under SYD, the remaining depreciable base would be multiplied by 4 ÷ (1 + 2 + 3 + 4) for 2021, or 4/10 × $600,000 = $240,000 in depreciation.

In 2020, Antle Inc. had acquired Demski Co. and recorded goodwill of $325 million as a result. The net assets (including goodwill) from Antle's acquisition of Demski Co. had a 2021 year-end book value of $660 million. Antle assessed the fair value of the Demski reporting unit at this date to be $780 million, while the fair value of all of Demski's identifiable tangible and intangible assets (excluding goodwill) was $715 million. The amount of the impairment loss that Antle would record for goodwill at the end of 2021 is:

Multiple Choice

Top of Form

* 

$65 million.

* 

$260 million.

* 

$0.

Correct

* 

$120 million.

Bottom of Form

**Explanation**

An impairment loss must be recognized if the fair value of the reporting unit acquired is less than its book value, including goodwill. In this case, the fair value is greater, so there is no impairment loss on goodwill.

Cutter Enterprises purchased equipment for $78,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $3,600.  
   
Using the sum-of-the-years'-digits method, depreciation for 2022 and book value at December 31, 2022, would be: **(Do not round depreciation rate per year)**

Multiple Choice

Top of Form

* 

$19,840 and $29,760 respectively.

* 

$20,800 and $31,200 respectively.

* 

$19,840 and $33,360 respectively.

Correct

* 

$20,800 and $27,600 respectively.

Bottom of Form

## Explanation

Depreciation, 2021 = ($78,000 − $3,600) × 5/15 = $24,800  
Depreciation, 2022 = ($78,000 − $3,600) × 4/15 = $19,840  
Book value, 12/31/2022 = $78,000 − $24,800 − $19,840 = $33,360

Cutter Enterprises purchased equipment for $72,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $8,100.  
   
Using the double-declining-balance method, the book value at December 31, 2022, would be:

Multiple Choice

Top of Form

* 

$25,920.

Correct

* 

$14,400.

* 

$27,120.

* 

$25,020.

Bottom of Form

## Explanation

Depreciation, 2021 = $72,000 × 40% = $28,800  
Depreciation, 2022 = [$72,000 − ($72,000 × 40%)] × 40% = $17,280  
Book value, 12/31/2022 = $72,000 − $28,800 − $17,280 = $25,920

Canliss Mining uses the *retirement* method to determine depreciation on its office equipment. During 2019, its first year of operations, office equipment was purchased at a cost of $15,000. Useful life of the equipment averages four years and no salvage value is anticipated. In 2021, equipment costing $5,500 was sold for $610 and replaced with new equipment costing $7,400. Canliss would record 2021 depreciation of:

Multiple Choice

Top of Form

* 

$4,930.

* 

$4,890.

Correct

* 

$4,850.

* 

None of these answer choices are correct.

Bottom of Form

## Explanation

Cost of equipment sold of $5,500 less proceeds of $610 = $4,890.

Robertson Inc. prepares its financial statements according to International Financial Reporting Standards (IFRS). At the end of its 2021 fiscal year, the company chooses to revalue its equipment. The equipment cost $565,000, had accumulated depreciation of $248,000 at the end of the year after recording annual depreciation, and had a fair value of $338,000. After the revaluation, the accumulated depreciation account will have a balance of: **(Do not round intermediate calculations.)**

Multiple Choice

Top of Form

* 

$248,000.

* 

$264,429.

Correct

* 

$269,000.

* 

None of these answer choices are correct.

Bottom of Form

## Explanation

$248,000 × ($338,000/$317,000) = $264,429.

In January 2021 Vega Corporation purchased a patent at a cost of $214,000. Legal and filing fees of $68,000 were paid to acquire the patent. The company estimated a 10-year useful life for the patent and uses the straight-line amortization method for all intangible assets. In January 2024, Vega spent $25,000 in legal fees for an unsuccessful defense of the patent and the patent is no longer usable. The amount charged to income (expense and loss) in 2024 related to the patent should be:

Multiple Choice

Top of Form

* 

$214,000.

* 

$ 53,200.

* 

$ 25,000.

* 

$222,400.

Correct

Bottom of Form

**Explanation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Initial value of patent: $214,000 + $68,000 = | $ | 282,000 |  |  |
| Less: Amortization for three years |  | (84,600 | ) | [($282,000 ÷ 10) × 3 = $84,600] |
| Book value in 2024 | $ | 197,400 |  |  |
| Plus: Legal fees for unsuccessful defense |  | 25,000 |  |  |
| Total expense and loss | $ | 222,400 |  |  |
|  | | | | |

Cutter Enterprises purchased equipment for $51,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $8,700.  
   
Using the sum-of-the-years'-digits method, depreciation for 2021 and book value at December 31, 2021, would be: **(Do not round depreciation rate per year)**

Multiple Choice

Top of Form

* 

$14,100 and $36,900 respectively.

Correct

* 

$17,000 and $34,000 respectively.

* 

$14,100 and $28,200 respectively.

* 

$17,000 and $25,300 respectively.

Bottom of Form

## Explanation

Depreciation, 2021 = ($51,000 − $8,700) × 5/15 = $14,100  
Book value, 12/31/2021 = $51,000 − $14,100 = $36,900

Short Corporation acquired Hathaway, Inc., for $25,890,000. The fair value of all Hathaway's identifiable tangible and intangible assets was $20,000,000. Short will amortize any goodwill over the maximum number of years allowed. What is the annual amortization of goodwill for this acquisition?

Multiple Choice

Top of Form

* 

$2,945,000.

* 

$0.

Correct

* 

$5,890,000.

* 

$1,472,500.

Bottom of Form

## Explanation

Goodwill is not amortized.

An asset acquired January 1, 2021, for $14,600 with an estimated 10-year life and no residual value is being depreciated in an equipment group asset account that has an average service life of eight years. The asset is sold on December 31, 2022, for $6,300. The entry to record the sale would be:

Multiple Choice

Top of Form

* 

|  |  |  |
| --- | --- | --- |
| Cash | $6,300 |  |
| Loss on sale of equipment | $8,300 |  |
| Equipment |  | $14,600 |

* 

|  |  |  |
| --- | --- | --- |
| Cash | $6,300 |  |
| Accumulated depreciation | $8,300 |  |
| Equipment |  | $14,600 |

* Correct
* 

|  |  |  |
| --- | --- | --- |
| Cash | $6,300 |  |
| Equipment |  | $6,300 |

* 

|  |  |  |
| --- | --- | --- |
| Cash | $6,300 |  |
| Accumulated depreciation | $3,650 |  |
| Loss on sale of equipment | $4,650 |  |
| Equipment |  | $14,600 |

Bottom of Form

Cutter Enterprises purchased equipment for $69,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $4,500.  
   
Using the straight-line method, depreciation for 2022 and the equipment's book value at December 31, 2022, would be:

Multiple Choice

Top of Form

* 

$27,600 and $41,400 respectively.

* 

$13,800 and $55,200 respectively.

* 

$12,900 and $43,200 respectively.

Correct

* 

$12,900 and $38,700 respectively.

Bottom of Form

## Explanation

Depreciation, 2022 = ($69,000 − $4,500) ÷ 5 = $12,900  
Book value, 12/31/22 = $69,000 − (2 × $12,900) = $43,200

On March 31, 2021, M. Belotti purchased the right to remove gravel from an old rock quarry. The gravel is to be sold as roadbed for highway construction. The cost of the quarry rights was $284,900, with estimated salable rock of 37,000 tons. During 2021, Belotti loaded and sold 5,600 tons of rock and estimated that 31,400 tons remained at December 31, 2021. At January 1, 2022, Belotti estimated that 16,800 tons still remained. During 2022, Belotti loaded and sold 11,200 tons. Belotti uses the units-of-production method.  
   
Belotti would record depletion in 2022 of: **(Round cost per ton to two decimal places.)**

Multiple Choice

Top of Form

* 

$174,288.

* 

$164,448.

* 

$163,368.

* 

$161,168.

Correct

Bottom of Form

## Explanation

Depletion in 2021 = ($284,900 ÷ 37,000) = $7.7 per ton × 5,600 = $43,120  
Depletion in 2022 = [($284,900 – $43,120) ÷ (16,800 tons)] = $14.39 per ton × 11,200 tons = $161,168

Canliss Mining uses the *replacement* method to determine depreciation on its office equipment. During 2019, its first year of operations, office equipment was purchased at a cost of $22,000. Useful life of the equipment averages four years and no salvage value is anticipated. In 2021, equipment costing $5,200 was sold for $450 and replaced with new equipment costing $8,200. Canliss would record 2021 depreciation of:

Multiple Choice

Top of Form

* 

$5,600.

* 

$4,750.

* 

$7,750.

Correct

* 

None of these answer choices are correct.

Bottom of Form

## Explanation

Cost of replacement equipment of $8,200 less proceeds of $450 = $7,750.

On March 31, 2021, M. Belotti purchased the right to remove gravel from an old rock quarry. The gravel is to be sold as roadbed for highway construction. The cost of the quarry rights was $211,600, with estimated salable rock of 23,000 tons. During 2021, Belotti loaded and sold 4,400 tons of rock and estimated that 18,600 tons remained at December 31, 2021. At January 1, 2022, Belotti estimated that 8,800 tons still remained. During 2022, Belotti loaded and sold 13,200 tons. Belotti uses the units-of-production method.  
   
Belotti would record depletion in 2021 of: **(Do not round depletion rate per ton.)**

Multiple Choice

Top of Form

* 

$50,056.

* 

$40,480.

Correct

* 

$39,395.

* 

$30,360.

Bottom of Form

## Explanation

Depletion in 2021 = ($211,600 ÷ 23,000 tons) = $9.2 per ton × 4,400 tons = $40,480

Granite Enterprises acquired a patent from Southern Research Corporation on January 1, 2021, for $4.0 million. The patent will be used for five years, even though its legal life is 20 years. Rocky Corporation has made a commitment to purchase the patent from Granite for $160,000 at the end of five years. Compute Granite's patent amortization for 2021, assuming the straight-line method is used.

Multiple Choice

Top of Form

* 

$768,000.

Correct

* 

$800,000.

* 

$384,000.

* 

$400,000.

Bottom of Form

## Explanation

The $160,000 purchase commitment is treated as the residual value of the patent.  
Amortization is as follows:  
($4,000,000 − $160,000) ÷ 5 years = $768,000.

Cutter Enterprises purchased equipment for $57,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $5,400.  
   
Using the double-declining-balance method, depreciation for 2022 would be:

Multiple Choice

Top of Form

* 

$22,800.

* 

$12,384.

* 

$13,680.

Correct

* 

None of these answer choices are correct.

Bottom of Form

## Explanation

Depreciation, 2022 = [$57,000 − ($57,000 × 40%)] × 40% = $13,680

Asset C3PO has a depreciable base of $27.50 million and a service life of 10 years. What would the accumulated depreciation be at the end of year five under the sum-of-the-years'-digits method? **(Do not round intermediate calculations.)**

Multiple Choice

Top of Form

* 

$7.50 million.

* 

$13.75 million.

* 

$20.00 million.

Correct

* 

None of these answer choices are correct.

Bottom of Form

## Explanation

$27.50 million × [(10 + 9 + 8 + 7 + 6)/55] = $20.00 million

Nanki Corporation purchased equipment on January 1, 2019, for $637,000. In 2019 and 2020, Nanki depreciated the asset on a straight-line basis with an estimated useful life of eight years and a $9,000 residual value. In 2021, due to changes in technology, Nanki revised the useful life to a total of four years with no residual value. What depreciation would Nanki record for the year 2021 on this equipment? **(Round your answer to the nearest dollar amount.)**

Multiple Choice

Top of Form

* 

$104,667.

* 

$105,248.

* 

$240,000.

Correct

* 

None of these answer choices are correct.

Bottom of Form

## Explanation

The depreciation for 2019 and 2020 was 2 × [($637,000 − $9,000) ÷ 8] = $157,000. This leaves a book value of $480,000 (i.e., $637,000 – $157,000). The revised life is 6 years and two have passed, so the new depreciation would be based on two remaining years = $240,000 (i.e., $480,000 ÷ 2).

Cutter Enterprises purchased equipment for $60,000 on January 1, 2021. The equipment is expected to have a five-year life and a residual value of $6,900.  
   
Using the straight-line method, the book value at December 31, 2021, would be:

Multiple Choice

Top of Form

* 

$41,100.

* 

$48,000.

* 

$42,480.

* 

$49,380.

Correct

Bottom of Form

## Explanation

($60,000 – $6,900) ÷ 5 = $10,620  
$60,000 – $10,620 = $49,380

On May 1, 2021, Hecala Mining entered into an agreement with the state of New Mexico to obtain the rights to operate a mineral mine in New Mexico for $10.5 million. Additional costs and purchases included the following ([FV of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_1.png), [PV of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_2.png), [FVA of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_3.png), [PVA of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_4.png), [FVAD of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_5.png) and [PVAD of $1](https://ezto.mheducation.com/extMedia/bne/accounting/spiceland_int_10e/table_6.png)) **(Use appropriate factor(s) from the tables provided.)**:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Development costs in preparing the mine | $ | 3,700,000 |  |
| Mining equipment |  | 139,500 |  |
| Construction of various structures on site |  | 93,500 |  |
|  | | | |

After the minerals are removed from the mine, the equipment will be sold for an estimated residual value of $12,000. The structures will be torn down.  
  
Geologists estimate that 850,000 tons of ore can be extracted from the mine. After the ore is removed the land will revert back to the state of New Mexico.  
  
The contract with the state requires Hecala to restore the land to its original condition after mining operations are completed in approximately four years. Management has provided the following possible outflows for the restoration costs:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cash Outflow | | |  | Probability |
| $ | 650,000 |  |  | 40% |
|  | 750,000 |  |  | 30% |
|  | 850,000 |  |  | 30% |
|  | | | | |

Hecala’s credit-adjusted risk-free interest rate is 7%. During 2021, Hecala extracted 125,000 tons of ore from the mine. The company’s fiscal year ends on December 31.  
**Required:**

**1.** Determine the amount at which Hecala will record the mine.  
**2.**Calculate the depletion of the mine and the depreciation of the mining facilities and equipment for 2021, assuming that Hecala uses the units-of-production method for both depreciation and depletion.  
**3.**How much accretion expense will the company record in its income statement for the 2021 fiscal year?  
**4.**Are depletion of the mine and depreciation of the mining facilities and equipment reported as separate expenses in the income statement?  
**5.** During 2022, Hecala changed its estimate of the total amount of ore originally in the mine from 850,000 to 1,050,000 tons. Calculate the depletion of the mine and depreciation of the mining facilities and equipment for 2022 assuming Hecala extracted 155,000 tons of ore in 2022.

Determine the amount at which Hecala will record the mine. (Do not round intermediate calculations. Round your final answer to nearest whole dollar.)

|  |
| --- |
|  |
|  | |  |  | | --- | --- | | Cost of mine | +/-5$14,764,546 | |

Calculate the depletion of the mine and the depreciation of the mining facilities and equipment for 2021, assuming that Hecala uses the units-of-production method for both depreciation and depletion. (Do not round your intermediate calculations. Round "Depreciation" and "Depletion" rates to 4 decimal places. Round your final answers to the nearest whole dollar.)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | |  | | Depletion | +/-5$2,171,263 | | Depreciation of equipment | $18,750 | | Depreciation of structures | $13,750 | |  |  | |

How much accretion expense will the company record in its income statement for the 2021 fiscal year? (Do not round intermediate calculations. Round your final answer to nearest whole dollar.)

|  |
| --- |
|  |
|  | |  |  | | --- | --- | | Accretion expense | +/-5$26,345 | |

Are depletion of the mine and depreciation of the mining facilities and equipment reported as separate expenses in the income statement?

|  |
| --- |
|  |
|  | |  |  | | --- | --- | | Separate expenses in the income statement | No | |

During 2022, Hecala changed its estimate of the total amount of ore originally in the mine from 850,000 to 1,050,000 tons. Calculate the depletion of the mine and depreciation of the mining facilities and equipment for 2022 assuming Hecala extracted 155,000 tons of ore in 2022. (Do not round your intermediate calculations. Round "Depreciation" and "Depletion" rates to 4 decimal places. Round your final answers to the nearest whole dollar.)

|  |
| --- |
|  |
|  | |  |  | | --- | --- | |  | **2022** | | Depletion | +/-1%$2,110,232 | | Depreciation of equipment | +/-1%$18,228 | | Depreciation of structures | +/-1%$13,361 | |

## Explanation

**1.**  
Hecala’s cost of the mineral mine is $14,764,546, determined as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| Mining site | $ | 10,500,000 |  |  |
| Development costs |  | 3,700,000 |  |  |
| Restoration costs |  | 564,546 | † |  |
|  | $ | 14,764,546 |  |  |
|  | | | | |