

Exercise #1 Answers

Solution

	<u>2021</u>	<u>2022</u>
Straight-line	\$2,400	\$ 9,600
Double diminishing- balance	5,200	18,720
Units-of-production	8,000	10,400

a. Straight-line: $(\$52,000 - \$4,000) \div 5 \text{ years} = \$9,600 \text{ per year}$; 2021: $\$9,600 \times \frac{3}{12} = \$2,400$

b. Double diminishing-balance: $200\% \div 5 \text{ years} = 40\% \text{ double diminishing-balance rate}$;

2021: $\$52,000 \times 40\% \times \frac{3}{12} = \$5,200$

2022: $(\$52,000 - \$5,200) \times 40\% = \$18,720$

c. Units-of-production: $(\$52,000 - \$4,000) \div 6,000 \text{ hours} = \8.00 per hour

2021: $1,000 \times \$8.00 = \$8,000$

2022: $1,300 \times \$8.00 = \$10,400$

Exercise #2 Answers

Solution

a. July 31, 2021	Depreciation Expense $[(\$500,000 - \$50,000) \div 30]$ Accumulated Depreciation—Building To record annual depreciation expense.	15,000 15,000
b. Aug. 1, 2021	Building Cash To record replacement of roof.	25,000 25,000
c. Cost:		\$ 500,000 Less: Accumulated depreciation $\$15,000 \text{ per year} \times 15 \text{ years}$ <u>225,000</u> Carrying amount before replacement of roof, August 1, 2021 275,000 Add: Capital expenditure (roof) <u>25,000</u> Carrying amount after replacement of roof, August 1, 2021 300,000 Less: Residual value <u>50,000</u> Remaining depreciable amount 250,000 Divide by: Remaining useful life $(40 - 15)$ <u>$\div 25 \text{ years}$</u> <u>\$ 10,000</u>
July 31, 2022	Depreciation Expense Accumulated Depreciation—Building To record revised annual depreciation expense.	10,000 10,000

Exercise #3

Solution

a.

Aug. 1, 2020	Copyrights	15,000	15,000
	Cash		
	To record purchase of copyright.		

b.

July 31, 2021	Amortization Expense (\$15,000 ÷ 3)	5,000	5,000
	Accumulated Amortization—Copyrights		
	To record amortization expense.		

c.

Aug. 1, 2021	Copyrights	6,000	6,000
	Cash		
	To record costs incurred to defend copyright.		

d.

July 31, 2022	Amortization Expense	8,000*	8,000
	Accumulated Amortization—Copyrights		
	To record revised amortization expense.		

* \$15,000 - \$5,000 + \$6,000 = \$16,000 carrying amount; \$16,000 carrying amount ÷ 2 years remaining = \$8,000

Exercise #4

Solution to Demonstration Problem 1

a. Straight-line method

Year	Amount	×	Rate	=	Expense	End of Year	
						Depreciation	Amount
							\$17,500
2021	\$16,000 ^a		25% ^b × 7/12		\$2,333	\$ 2,333	15,167
2022	16,000		25%		4,000	6,333	11,167
2023	16,000		25%		4,000	10,333	7,167
2024	16,000		25%		4,000	14,333	3,167
2025	16,000		25% × 5/12		1,667	16,000	1,500

^a\$17,500 - \$1,500 = \$16,000

^b100% ÷ 4 years = 25%

b. Units-of-production method

Year	Units of Production	×	Depreciable Amount/Unit	=	Depreciation Expense	End of Year	
						Accumulated Depreciation	Carrying Amount
							\$17,500
2021	1,300		\$1.60 ^a		\$2,080	\$ 2,080	15,420
2022	2,800		1.60		4,480	6,560	10,940
2023	3,300		1.60		5,280	11,840	5,660
2024	1,900		1.60		3,040	14,880	2,620
2025	700		1.60		1,120	16,000	1,500

^a\$17,500 - \$1,500 = \$16,000 depreciable amount ÷ 10,000 total units = \$1.60/unit

c. Diminishing-balance method

Year	Carrying Amount Beginning of Year	×	Depreciable Rate (25% × 2)	=	Depreciation Expense	End of Year	
						Accumulated Depreciation	Carrying Amount
							\$17,500
2021	\$17,500		50% × 7/12		\$5,104	\$ 5,104	12,396
2022	12,396		50%		6,198	11,302	6,198
2023	6,198		50%		3,099	14,401	3,099
2024	3,099		50%		1,549	15,950	1,550
2025	1,550		50%		50 ^a	16,000	1,500

^aAdjusted to \$50 so that the carrying amount at the end of the year is not less than the residual value.

Exercise #5

Solution to Demonstration Problem 2

$\$78,000 - \$4,000 \div 4 \text{ years} = \$18,500$ annual depreciation expense

Accumulated Depreciation at December 31, 2023: $\$18,500 \times 3 \text{ years} = \$55,500$

a.

Jan. 2, 2024	Accumulated Depreciation—Vehicles	55,500	
	Loss on Disposal [$\$0 - (\$78,000 - \$55,500)$]	22,500	
	Vehicles		78,000
	To record retirement of limo.		

b.

July 1, 2024	Depreciation Expense ($\$18,500 \times 6/12$)	9,250	
	Accumulated Depreciation—Vehicles		9,250
	To record depreciation for six months.		
	Cash	15,000	
	Accumulated Depreciation—Vehicles ($\$55,500 + \$9,250$)	64,750	
	Gain on Disposal [$\$15,000 - (\$78,000 - \$64,750)$]		1,750
	Vehicles		78,000
	To record sale of limo.		

c.

Jan. 2, 2024	Vehicles (cost of new) ($\$20,000 + \$52,000$)	72,000	
	Accumulated Depreciation—Vehicles	55,500	
	Loss on Disposal [$\$20,000 - (\$78,000 - \$55,500)$]	2,500	
	Vehicles (cost of old)		78,000
	Cash		52,000
	To record exchange of limousines, plus cash.		