

Agriculture  
Depreciation Worksheet

Name

Key

1. A car costs \$<sup>a</sup>11,500 and decreases in value by 10% per year. How much will the car be worth after <sup>x</sup>5 years?

$$b = 100\% - 10\% \\ b = 90\% \\ b = .9$$

$$y = ab^x \\ y = 11500(.9)^5 \\ y = 6790.64$$

\$6790.64

2. A \$<sup>a</sup>34,900 new car depreciates at a rate of 12% per year. Write the exponential equation and find the value of the car after <sup>x</sup>8 years.

$$b = 100\% - 12\% \\ b = 88\% \\ b = .88$$

$$y = ab^x \\ y = 34900(.88)^8$$

$$y = 34900(.88)^8$$

\$12551.24

3. A John Deere S660 Combine costs \$393,820 new and has an economic life of 15 years with a salvage value of \$51,196.60. Find the depreciation of the combine using the straight-line depreciation method for the 12<sup>th</sup> year.

$$\text{Annual dep} = \frac{393820 - 51196.60}{15} = 22841.56$$

$$y = -22841.56x + 393820$$

$$y = -22841.56(12) + 393820$$

$$y = 119721.28$$

\$119,721.28

4. A NH Skid Steer Loader costs \$43,662 new and has an economic life of 15 years with a salvage value of \$11,352.12. Find the depreciation of the loader using the straight-line depreciation method for the 10<sup>th</sup> year.

$$\text{Annual dep} = \frac{43662 - 11352.12}{15} = 2153.99$$

$$y = -2153.99x + 43662$$

$$y = -2153.99(10) + 43662$$

$$y = 22,122.10$$

\$22,122.10

5. Find the salvage value after 12 years using Table 1A for a 120-hp tractor costing \$85,000 with 600 hours of annual use.

$$85,000 \begin{matrix} 33\% \\ (.33) \end{matrix} \\ 28,050$$

\$28,050

6. Find the salvage value using Table 1B for a John Deere 1705 Planter costing \$40,068 with an economic life of 15 years.

$$40068 \overset{34\%}{(-.34)}$$

$$13623.12$$

\$ 13,623.12

7. Find the salvage value using Table 1B for a NH H7150 Mower costing \$18,839 with an economic life of 12 years.

$$18839 \overset{22\%}{(-.22)}$$

$$5086.53$$

\$ 5,086.53

8. Find the salvage value of 256 Rake BTO costing \$7,422 after 5 years with a 9% rate of depreciation.

$$y = 7422 \overset{b=100\% - 9\%}{(-.91)^5}$$

$$y = 4631.57$$

\$ 4,631.57

9. Find the salvage value of a Rear Boom Sprayer costing \$57,739 after 10 years with a 9% rate of depreciation.

$$y = 57739 \overset{b=100\% - 9\% = 91\%}{(-.91)^{10}}$$

$$y = 22484.50$$

\$ 22,484.50

10. Find the salvage value of a 100-hp tractor costing  $\overset{a}{\$65,000}$  after  $\overset{x}{12}$  years with a  $\overset{r}{7\%}$  rate of depreciation.

$$y = 65000 \overset{b=100\% - 7\% = 93\%}{(-.93)^{12}}$$

$$27,208.76$$

\$ 27,208.76