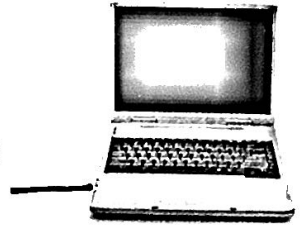


Homework: Depreciation Problems

- 1) A computer valued at \$6500 depreciates at the rate of 20% per year. Write a function that models the value of the computer then find the value of the computer after three years.

$r = (1 - 20\%) =$



- 2) A new truck that sells for \$29,000 depreciates 12% each year. Write a function that models the value of the truck. Find the value of the truck after 7 years.
- 3) A new car that sells for \$18,000 depreciates 25% each year. Write a function that models the value of the car. Find the value of the car after 4 years.
- 4) You purchased a car for \$19,500. The car will depreciate at a rate of 12% each year. Write a formula to represent the value of the car after x number of years. Find the value of the car after 4 years.

- 5) Each table below shows the expected decrease in a car's value over the next five years. Both of the cars' values are decreasing exponentially. Write a function to model each car's depreciation. Determine which car will be worth more after 10 years.

$19200 \div 24000 = .8$
 $24000 \div 30000 = .8$

Year	0	1	2
Value of Car 1	\$ 30,000	\$ 24,000	\$ 19,200

Common ratio? $r = .8$

Depreciating by what percent?

Explicit Equation: $y = 30,000(.8)^x$

Value after 10 Years: _____

Year	0	1	2
Value of Car 2	\$ 15,000	\$ 14,250	\$ 13,537.50

Common ratio?

Depreciating by what percent?

Explicit Equation: _____

Value after 10 Years: _____

Therefore, car # _____ will be worth more money after 10 years.