



# Depreciating Value of a Used Car

The amount you paid for your new car may not be the actual value of your car. Once you drive the car off the dealership lot, the value of the car decreases. The price will continue to decrease over the years based on the car's age and condition. The amount the car is worth is its depreciated value. The amount a car can depreciate is usually between 15% and 20% each year.

## Depreciation Formula

$$y = 1 - \left( \frac{x}{s} \right)^{\frac{1}{n}}$$

- s = initial selling price of the car
- n = age of the car in years
- y = depreciation rate of the car
- x = current value

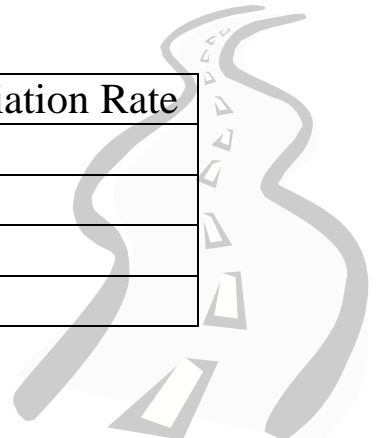
**Rewrite formula for the car's current value in terms of the depreciation rate.**

Make/model: \_\_\_\_\_

Price: \_\_\_\_\_

**Determine the current values given the information.**

Year	15% Depreciation Rate	20% Depreciation Rate
1		
5		
10		
15		



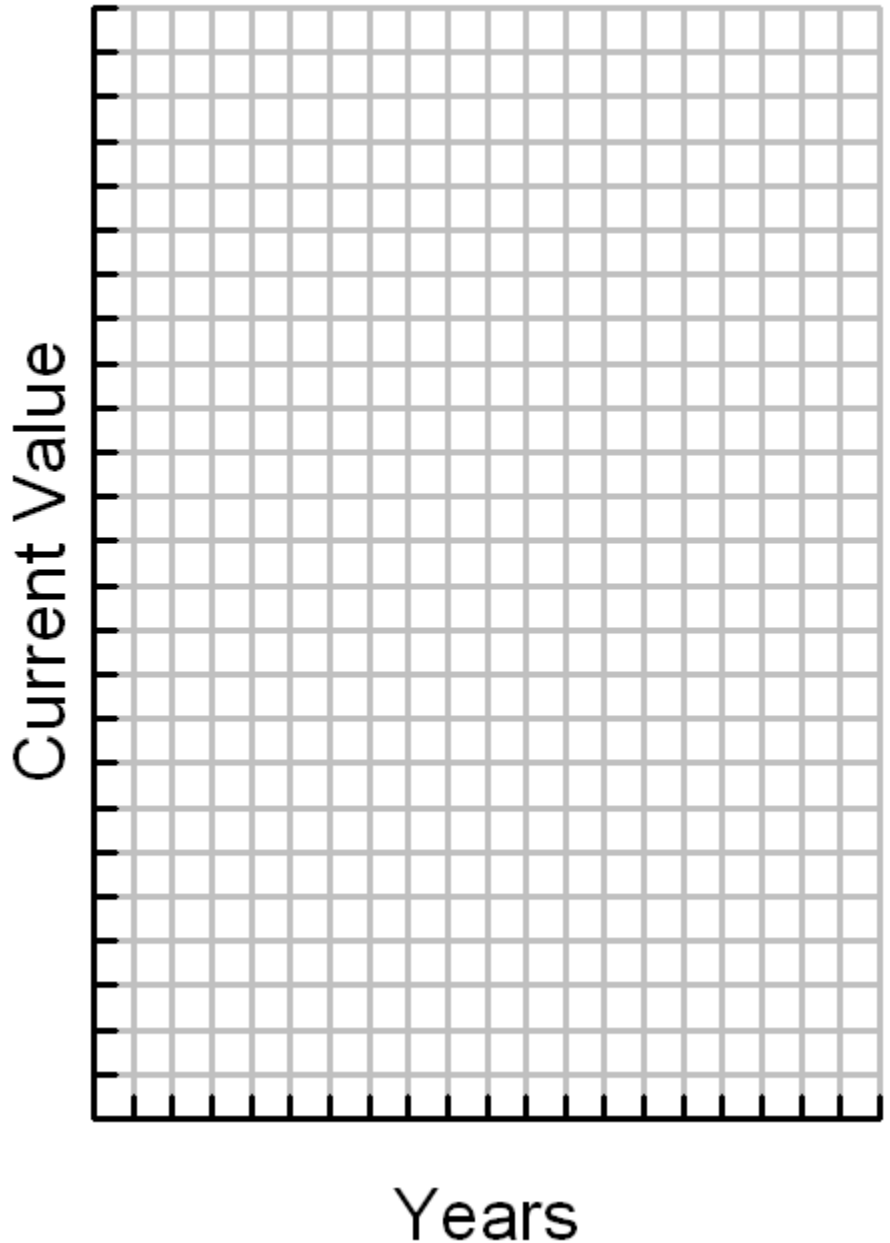


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Create a graph for the current value of your car at a 15% depreciation rate.

When will the value of the car be equal to half its selling price?

In what year will the car have a value of less than \$1,000?



After how many years will the car have a value of \$0? Explain.





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