

6-7 Day 1 Depreciating a Car

Math Skill Builder

1. **Divide** money amounts by whole numbers.

a) $\$23,580 \div 9$

$\$2,620$

b) $\$12,438 \div 3$

$\$4,146$

Average Annual Depreciation

A car loses value as it grows older. The loss of value is called depreciation. The total depreciation on a car is the difference between its original cost and its resale, or trade-in value.

Resale Value – The amount you receive when you sell an asset, such as a car.

Trade-in Value – The amount you get for your old car or other asset when buying a new car or other asset.

When you buy a car, you can only estimate what the depreciation will be. The actual amount of depreciation will be known only when the car is sold or traded in. However, by making some good guesses about your car's future value, you can calculate the estimated average annual depreciation

To calculate the *estimated* average annual depreciation on a car or other motor vehicle follow these steps:

1. Estimate the number of years the car will be kept.
2. Estimate the value of the car when it is resold or traded in.
3. Subtract trade-in value or resale value from the original cost to estimate total depreciation.
4. Divide the total depreciation by the number of years the car will be kept.

To calculate *actual* average annual depreciation, also follow these for steps, keeping in mind that you are using actual, not estimated amounts. For example, you do not have to estimate the length of time you keep the car or its resale or trade-in value. You use the actual time and dollar amounts.

You can use the following formula to find estimated and actual average annual depreciation.

FORMULA:

Average Annual Depreciation =

$$\frac{\text{Original Cost} - \text{Trade-in or Residual Value}}{\text{Number of Years}}$$

Example 1:

- a) Linda bought a car for \$14,800. She estimated its trade-in value will be \$5,800 at the end of 4 years. Find the estimated total and the estimated average annual depreciation of the car.

$$\text{Average Annual Depreciation} = \frac{14800 - 5800}{4} = \frac{9000}{4} = \boxed{\$ 2,250}$$

$$\text{Estimated Total} = 14800 - 5800 = \boxed{\$ 9,000}$$

- b) Roland bought a new car of \$19,500. He has been told that his car will probably be worth \$9,800 at the end of two year. What will be his estimated total and average annual depreciation for two years?

$$\text{Estimated Total} = 19500 - 9800 = \boxed{\$9,700}$$

$$\text{Average Annual Depreciation} = \frac{9700}{2} = \boxed{\$4,850}$$

When the average annual depreciation is calculated at is was above this is called the straight-line method. It assumes the car depreciates the same amount each year.

CLOSURE:

1. Genevieve bought a car 9 years ago for \$14,130. She sold it recently for \$1,800. What was the total and average annual depreciation on the car?

$$14130 - 1800 = \boxed{\$12,330}$$

$$\frac{12330}{9} = \boxed{\$1,370}$$

