Homework

Directions: Answer the questions after each situation.

The value of an early American coin increases in value at the rate of 6.5% annually. The purchase price of the coin this year is $1,950.

1. What is the equation which represents this situation where A is the total value of the coin and t is the time in years?

2. What will be the value of the coin, to the nearest dollar, in 15 years?

Depreciation (decline in value) of a car can be determined by the formula $V = c(1 - r)^t$ where V represents the value of the car after t years, c is the original cost, and r is the rate of depreciation. The car cost $25,000 when it was new and the rate of depreciation is 8%.

3. What is the value of the car after 2 years?

4. What is the value of the car after 4.5 years?

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The cost of maintenance on an automobile increases each year by 10%. Albert paid $400 this year for maintenance for his car.

5. What is the equation which represents this situation where A is the total value of the maintenance and t is the time in years?

6. What will the cost be, to the nearest dollar, seven years from now?

Matthew was born weighing 7.875 pounds. During his first year of life, he grew at a rate of 8% per month.

7. What is the equation which represents this situation where T is the total weight of the baby and m is the time in months?

8. To the nearest tenth of a pound, how much did Matthew weigh on his first birthday?

The population of Welch is decreasing at a rate of 5% per year. The population was 4,500 in 1992.

9. What is the equation which represents this situation where P is the total population and t is the time in years?

10. What will be the population in 2010 to the nearest person?