

Math C

10.3 Modeling Exp. part 2

1. Suppose a \$100,000 piece of equipment is depreciating at 10% a year.
  - a) How much is it worth after 3 years?
  - b) How much is it worth after 10 years?
  - c) How long will it take to be worth less than \$20,000?
2. Suppose a Cadillac depreciates at 18% a year.
  - a) How long does it take for the car to be worth only half of its original price?
  - b) How much of its original price is it worth after 5 years?
3. The population of a particular bacteria triples every hour. Initially there are 100 bacteria. How many bacteria will there be 6 hours later?
4. The population of the United States tripled between the years 1790 and 1830. The population in 1790 was 4 million. If the population continued to grow at that rate, what would the population have been in 1950?

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**Answer List**

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|----------------------------------|------------------------------|
| 1.    \$72,900, \$34,868; 16 yrs | 2. $\approx 3.5$ yrs, 37.07% |
| 3.    72900                      | 4.    324 million            |

**Catalog List**

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|-----------------|-----------------|-----------------|-----------------|
| 1.    TRI KI 46 | 2.    TRI KI 48 | 3.    TRI KI 52 | 4.    TRI KI 54 |
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