

F.LE.B.5: Modeling Exponential Functions 2

- 1 An equation to represent the value of a car after t months of ownership is $v = 32,000(0.81)^{\frac{t}{12}}$. Which statement is *not* correct?
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|--|---|
| 1) The car lost approximately 19% of its value each month. | 3) The value of the car when it was purchased was \$32,000. |
| 2) The car maintained approximately 98% of its value each month. | 4) The value of the car 1 year after it was purchased was \$25,920. |
- 2 The function $p(t) = 110e^{0.03922t}$ models the population of a city, in millions, t years after 2010. As of today, consider the following two statements:
- I. The current population is 110 million.
 - II. The population increases continuously by approximately 3.9% per year.
- This model supports
- | | |
|-------------|---------------------|
| 1) I, only | 3) both I and II |
| 2) II, only | 4) neither I nor II |

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Answer Section

- 1 ANS: 1
The car lost approximately 19% of its value each year.

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- 2 ANS: 2
The 2010 population is 110 million.

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