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A=Mitial(1±1)time

Date Algebra II

Interpreting Exponential Functions

1. The function $A = 3,600(1.025)^t$	represents the value of a bank account after t years. Which of
the following statements is false?	

1) The initial investment of the bank account was \$3,600. \checkmark 1.025-|=.025(100)=2.5%

2) The annual interest rate of the bank account is 2.5%.

3) The value of the account after 5 years is \$4073.07. $3,600(1.025)^5 = 4073.07$ 3) The value of the account after 3 years is 34073.07. June 3600 (1.025) = 48+11.00 Pidyt

2. The function $v(t) = 10,000(1.112)^t$ represents the value of a stock investment after t years. Which of the following statements is *false*?

1) The stock is increasing by 11.2% each year. |.||2-|=.||2(100)=||.27.||

2) The value of the stock after 3 years is \$13,750.37 $|0,000(1.112)|^3 = 13.750.37$ 3) The value of the stock increased by \$1245.44 between year 1 and year 2. |0,000(1.112)| = 11120

10,000 (1.112)2 = 12365.44

2) The value of the stock increased by \$12.

4) The initial stock investment was \$11,120. \(\frac{1}{10000}\) was initial must must have

12365.44-11120=1745.44

3. The function $v(t) = 40,000(0.887)^t$ represents the value of a 2020 Subaru Ascent after t years. Which of the following statements is *false*?

1) The initial value of the car was \$40,000.

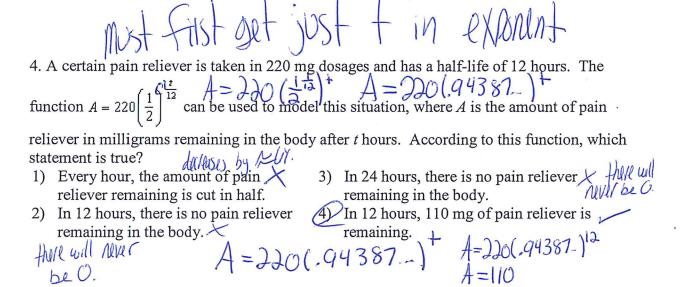
2) The value of the car is decreasing by 11.3% each year. 1-.887=(.113)100=11.313) The car is worth \$15,324.18 after 5 years. $40,000(.887)^5=2.1962.31$ 4) The decreased \$3.556.20 from years 2 to 2

3) The car is worth \$15,324.18 after 5 years.

4) The decreased \$3,556.20 from years 2 to 3.

 $40,000(.887)^2 = 31470.76$ $40,000(.887)^3 = 27914.56$

31470.76-27914.56=3556.20



5. An equation to represent the value of a car after t months of ownership is $v = 32,000(0.81)^{\frac{1}{12}}$.

Which statement is not correct?

Which statement is not correct? $V = 32,000(0.81)^{\frac{1}{12}}$ The car lost approximately 19% of its value each month. $V = 32,000(0.81)^{\frac{1}{12}}$ The car maintained approximately 98% of its value each month.

3) The value of the car when it was purchased was \$32,000.

4) The value of the car 1 year after it was purchased was \$25,920. $32,000 (.98259-)= 325920 \nu$

6. The value of an investment account, v(t), can be modeled by the equation $v(t) = 500(1.15)^{3.2t}$ after t years. Which of the following statements must be true?

1) The account is increasing approximately 15% each year.

2) The account is increasing approximately 56% each year.

3) There will be \$1216.80 in the account after two years $500(1.56)^2 = 1223$.

4) It will take 3.68 years for the account to double $500(1.56.)^{3.68} = 2592.$

much more than doubled