Math Virtual Learning

College Algebra

April 30, 2020

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Lesson: April 30, 2020

Objective/Learning Target: Students will able to solve real world problems using logarithmic equations

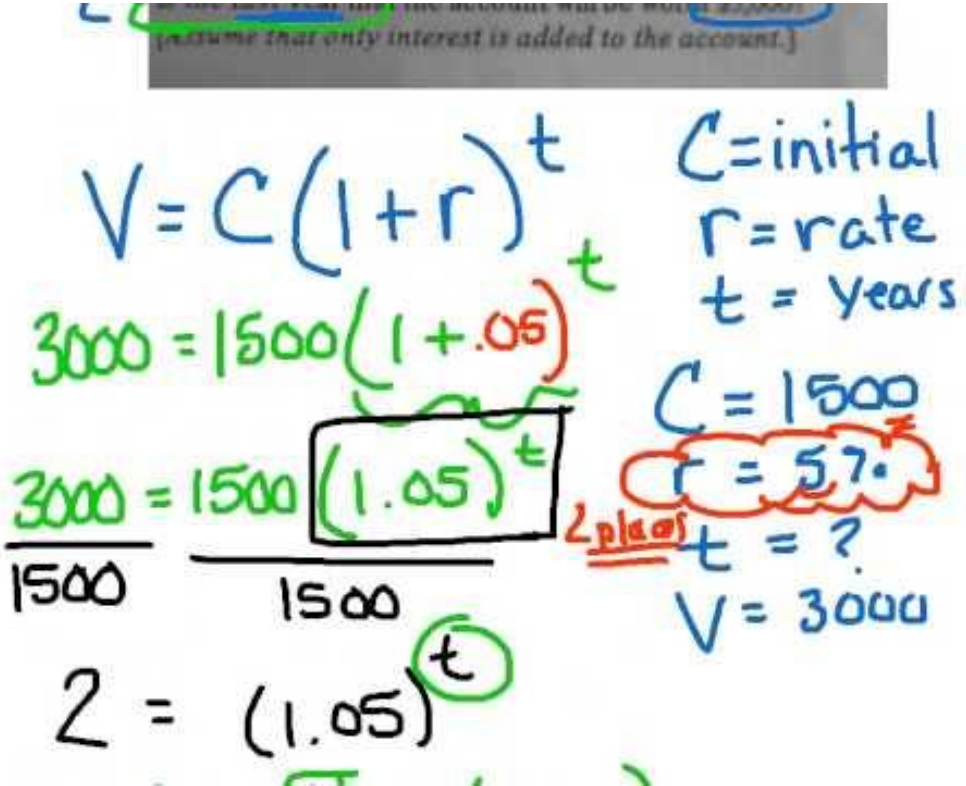
Warm Up Activity:

Practice the problems at the link to refresh your skills on solving exponential equations.

Skill Practice

Lesson:

Watch the video over logarithmic word problems examples. We encourage you to have your own sheet of paper out and work along with the video.



Practice:

1. Zack pays a $710 premium for insurance. If the premium increases at a semi-annual rate of 9.2% , how many years will it take for the premium to be $873.30?

2. Ted bought a savings bond for $4,210. If he cashes the bond after four years, he'd get $5559.83. The interest on the bond is compounded annually, what is the interest rate on the bond?

Practice Problems:

3. How many years will take a town's population to double if the growth rate remains constant at rate of ten percent per year?

4. How much interest Brad has to pay to George if he borrowed $120, 14 months ago at the rate of 12.4% per annum?

Also look at problems 2-4 here

Practice Answers:

1. 5 years
2. 7.2%
3. 1 year 8 months
4. $17.36

Additional Practice: Links for Problems #39 & #46

39. What principal should be deposited at 8.375% compounded monthly to ensure the account will be worth $20,000 in 10 years?

a. $10,884.35
b. $8,681.04
c. $5,141.21
d. $6,097.12

46. Determine the principle that must be invested at a rate of 9% compounded monthly so that the balance in 20 years will be $35,000.

a. $12,500.00
b. $9,470.00
c. $6914.23
d. $5,824.45

Additional Practice Answers:

39) B

46) D

Answers linked to Answer Key