Assignment the solution

Education

In this function is the population at time O, P is the population after time t, and k is called the exponential growth rate. For this problem about the population of rats, represents the rats population at O, P is the rats population after time t 7 days and 14 for 2 weeks as seen in and and k is the rats exponential growth rate which is represented by the 13. 6% or the decimal O. 136. Using this equation we calculate that in 1 week the rats have grown from 100 rats to 259 rats and in 2 weeks the rats have grown from 100 rats to 671 rats. The sat part of this problem asks us to find the doubling time of the population of the rats.

The algebraic solution for this is represented by solving for T. The equation for this is and now I will tell you what it substitutes. We substitute 200 for and the rest of the equation uses the natural logarithm to solve for doubling time of the rats population. Some of the topics in this course this problem relates to are natural logarithms, exponential functions, and graphing. These functions are applicable to the business, science, psychologyandsociologyfields. The Intersect method for this problem is used in thetechnologyfield. The answer from this problem states the population of rats will double in 2 weeks.

Method The method of problem solving that I use is, I find another problem like this one and match the numbers up to the equation of the other problem, solve this problem parallel to the other problem following the guided steps, essentially multi-tasking, solving two problems at the same time. I call this method " Killing two birds with one stone. " Once I have worked both problems to their simplified form, I input this information into a

calculator to arrive at y answer. The variety Of ways to solve this problem is through the use Of a calculator and the growth / decay formula.

My rationale for selecting the method adopted is because like to keep things simple. Pre; calculus is complicated as it is. It would be easy for me to overprint solving problems if I did not keep it simple. Also tend to not fully grasp the concepts unless solve the problems slowly and double checking my work. Explanation The easiest way can explain solving this problem to someone would be to patiently go through the problem step-by-step with them pausing along the ay making sure they are grasping the concepts of solving the problem.

I would start by reading the word problem thoroughly, taking note of the numbers in the word problem. I would then use the exponential growth rate formula matching the numbers up to the equation and begin to solve the problem using P. E. M. D. A. S. It is a staple to any math problem. Certain rules apply that cannot be ignored. Will conclude this problem with assisting them through the doubling formula of to find its solution.

Conclusion The solution to the population of rat's problem clearly states that using the exponential growth function, the rat's population after one week is 259 rats and the population doubles after two weeks giving us 671 rats. If my calculations are correct the 5 for T in the solution represents a 5 year mark? This solution Was derived by dividing the natural logarithm of Len by the percentage of 0. 136 in decimal form. Given this information it is possible to state that the rats population will double in size from 671 in two weeks to

another greater number in 5 years. I will firmly agree that this solution is correct.