

## Re: Solving this Equation For N

---

*Source:* <http://sci.tech-archive.net/Archive/sci.math/2006-08/msg02886.html>

---

- *From:* "[Mr.] Lynn Kurtz" <kurtzDELETE-THIS@xxxxxxx>
  - *Date:* Wed, 23 Aug 2006 19:23:17 GMT
- 

On 23 Aug 2006 11:26:09 -0700, "Protoman" <Protoman2050@xxxxxxxxxx> wrote:

How do I solve this equation for N, b/c I completely forgot how to do it:

$$N/(7500-N) = .0204082e^{.8472969T}$$

Rational expressions where the variable appears on both the numerator and denominator were always hard for me. Thanks!!!!

Well, I guess if you post enough questions separately on usenet about the various steps, you will eventually get the problem worked for you instead of doing it yourself. Interesting history this:

- 1 First, you quote a story problem and ask for help setting it up.
2. Hints are supplied and eventually someone just gives you the logistic equation  $N'(t) = k N(t) (7500 - N(t))$
3. You then inquire whether this equation is separable.
4. After reading replies you get the separated equation:  
 $dN / (N (7500 - N)) = k dt$  but need help on the left side because, quote, "I don't understand partial fractions AT ALL".
5. After receiving advice and references you are now stuck on the above question, solving for N.

Once someone shows you how to do that you will have your problem solved.

Don't forget to credit all who helped you on usenet when you turn in that homework.

--Lynn

.