

8. In this problem you need to find an exponential growth function. You can always start with the general form of an exponential growth function:

$f(t) = A e^{kt}$ This is the method used in the textbook. This form is commonly used because "e" is the natural base in calculus and k is a useful constant.

To use this function you 1st need to use given information to find constants A and k. You can then use the function to find f(t) for different values of t.

An alternate and equivalent exponential growth function is

$$f(t) = A \cdot b^t$$

Need two constants A and b.
Here is why they are the same:

$$f(t) = A e^{kt} = A (e^k)^t = A b^t$$

where $b = e^k$. Use this to find k from b.

(4)