

4. In 1950, a very invasive tree was introduced into a mountainous region of South Africa. Since then, the number of trees has grown exponentially. Suppose that $N(t)$ gives the number of trees, in *thousands*, as a function of time, t , measured in years since 1950.

(a) (3 points) In the context of this problem, explain the meaning of $N^{-1}(25) = 46$.

(b) (3 points) In the context of this problem, explain the meaning of $N'(46) = 3$.

(c) (4 points) If 100 trees were introduced in 1950, use the above information to find a formula for $N(t)$.