

## APP-2 Exponential Growth/Decay

(complete all parts for M, complete 2 of 3 parts for P)

The population of a certain fish in a stocked lake is given by  $P(t) = \frac{8000}{2+3e^{-0.8t}}$ , where  $t$  is the time in years.

Leave answers as integers, simplified fractions, or in terms of natural logarithms.

a) What is the initial population of the fish in the lake?

b) When will the population reach 2000 fish?