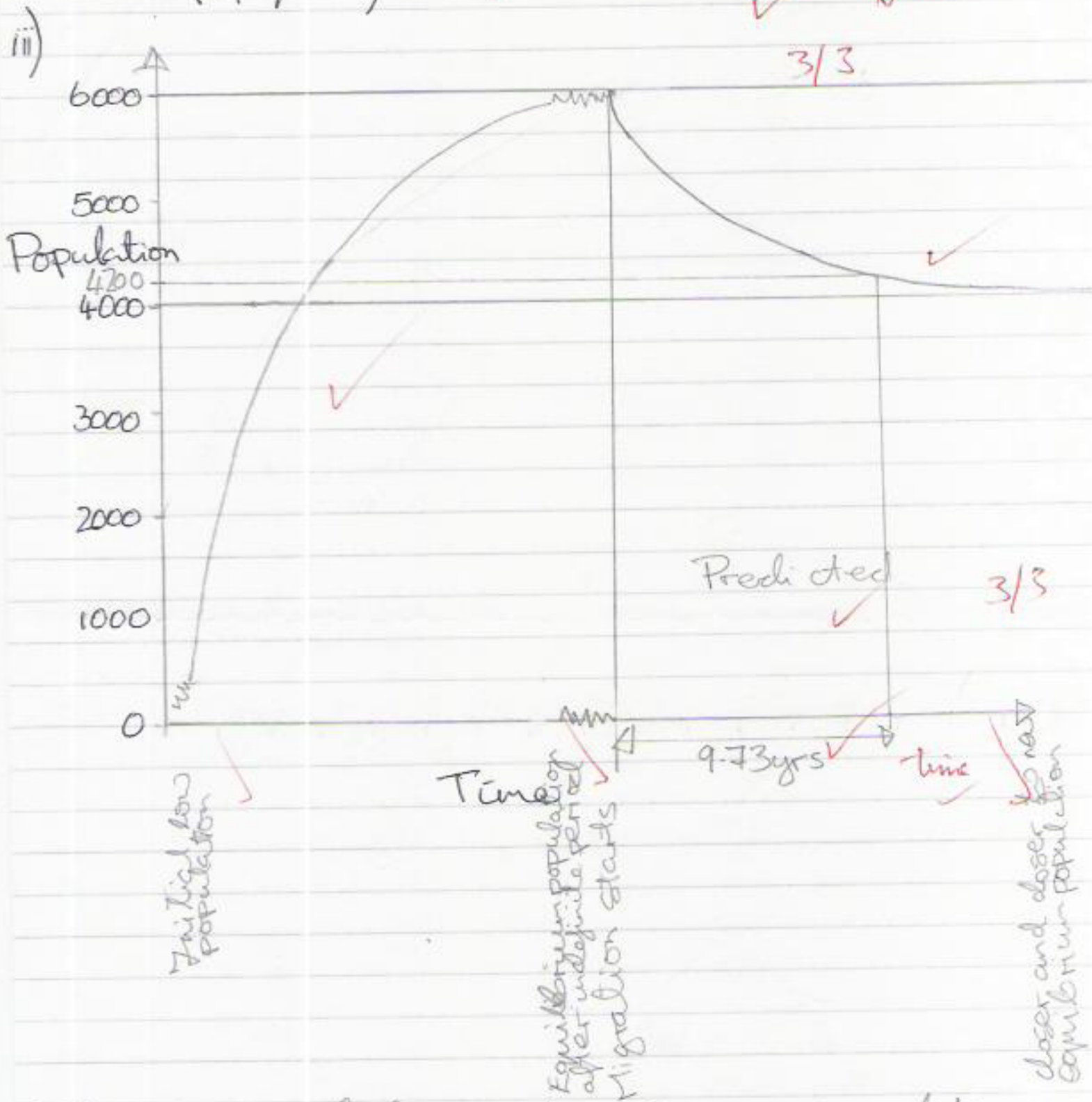


$$t = 5 \ln \left( \frac{21}{-1} / -3 \right) = 5 \ln 7 = 9.73 \text{ years}$$

A lot easier just to use the formula.



PS The population when increasing takes an indefinitely long time to reach its equilibrium level. When it is decreasing after migration starts, it never reaches its equilibrium level of 4000 or only after an indefinitely long time.