

ESQ 6

Solve: $2(e)^{x-2} = \frac{20}{2}$

$$e^{x-2} = 10$$

$$\log_e 10 = x - 2$$

$$2 + \ln 10 = x$$

How much of an initial investment would you need for it to be worth at least \$4500, if it is compounded yearly at 7% over 11 years?

Create an inequality, but do not solve it, that could be used to find the initial investment.

$$4500 = P(1 + 0.07)^{11} \quad A = P(1 \pm r)^t$$

$$P(1.07)^{11} \geq 4500$$

There are 5000 fish in a pond and their population is decreasing at a continuous rate of 15%. Create an inequality, but do not solve it, that could be used to find how long it will take until there are at most 30 fish left.

$$30 = 5000e^{-0.15t}$$

$$5000e^{-0.15t} \leq 30$$