1. Compute the equilibrium point \((u^*, v^*)\) of the discrete model system

\[
\begin{align*}
    u_n &= 3u_{n-1} - 2v_{n-1} - 4 \\
    v_n &= 5u_{n-1} - 3v_{n-1} - 28
\end{align*}
\]

2. Consider the following continuous model of a predator-prey system.

\[
\begin{align*}
    \frac{dV}{dt} &= 0.6V \left(1 - \frac{V}{100}\right) - 0.02VP = [0.6 \left(1 - \frac{V}{100}\right) - 0.02P]V \\
    \frac{dP}{dt} &= -0.4P + 0.005VP = (-0.4 + 0.005V)P
\end{align*}
\]

a. What kind of growth does the victim population exhibit if there are no predators (i.e., \(P = 0\))? What kind of long term trend is there for the predator if there are no victims (i.e., \(V = 0\))?  

b. Compute the equilibrium \((V^*, P^*)\) other than \((0,0)\) for the predator-prey system. Suggestion: find \(V^*\) first.