1. For the following system of differential equations: find all equilibrium points, what happens to solutions which start on the $x$ or $y$ axes, draw the nullclines and use these curves to try to decide what happens to solutions which start in regions between the nullclines?

\[
\frac{dx}{dt} = x(100 - x - 2y) \\
\frac{dy}{dt} = y(150 - x - 6y)
\]

2. Use Euler’s method to find, on the interval $[0, 3]$, a numerical approximation to the solution of the above system of differential equations with initial conditions $x(0) = 60$, $y(0) = 10$. Calculate the approximate values of the solutions at values of $t$ in the form $t = i/5$, where the integer $i$ runs from 0 to 15.