190 1. (a) \( x = 0 \) and \( y = b \) 
\[ y = 2x - x - 1 \] 
Setting \( x = 0 \) and \( y = b \) we find 
- equilibrium point \((0, 2)\) 
- equilibrium point \((0, 1)\) 
- equilibrium point \((0, 0)\) 
Equilibrium points: \((0, 0), (0, 2), (0, 1)\) 

It can be seen from the figure that the equilibrium points \((0, 0)\), \((0, 2)\) and \((0, 1)\) are unstable. Only the point \((0, 2)\) is stable because all solutions curves nearby point toward it.

(b) Some solution curves are shown in the figure.

(c) Because all the solution curves eventually reach the stable equilibrium at \((0, 2)\), the two species described by this model cannot coexist.

192 2. (a) \( x = e^{(x - y)} \) 
\[ y = x + e^{-x} \] 
Setting \( x = 0 \) and \( y = 0 \) we find 
- equilibrium point \((0, 0)\) 
- equilibrium point \((1, 0)\) 
Equilibrium points: \((0, 0), (1, 0)\) 

It can be seen from the figure that the equilibrium point \((0, 0)\) and \((1, 0)\) are unstable, the point \((0, 0)\) is stable because all solution curves nearby point toward it.

(b) Some solution curves are shown in the figure.

(c) Because all the solution curves eventually reach the stable equilibrium at \((0, 0)\), the three species described by this model cannot coexist.