Let U(x,y)= Axayb be the utility function of an individual. The individual has x hour leisure time per day and consumers y units of other goods. The individual works and is paid w $ per hour. The average price of the other goods is p $. We assume that the individual spends his/her total income i.e.

py = w(24 – x)

Use the Lagrange method to determine how many hours this individual works per day to maximise the utility.