Problem Set #1

1. Metru Nui is an island city with a labor supply \( \bar{L} = 50,000 \) and a capital stock \( \bar{K} = 500 \). Their production function is \( Y = \frac{1}{2} L^{\frac{1}{2}} K^{\frac{1}{2}} \). Their economy is well described by the following equations:

\[
Y = C + I + G + NX
\]

\[
C = 250 + 0.75(Y - T)
\]

\[
I = 1000 - 50r
\]

\[
G = 1000
\]

\[
T = 1000
\]

\[
NX = 0
\]

There is no trade because they are located far below the surface of the island Mata Nui. Let the price level equal 1. What is the wage \( w \) and interest rate \( r \) in this economy?


Ch2, p44, #7
Ch3, p78, #1
Ch3, p79, #8
Ch3, p79, #9
Ch3, p79, #11

*Due Thursday 25 January*