

Economics 304
Daily Problem #3

Fall 2013
September 11

Suppose that production in Solovia is characterized by the following Cobb-Douglas production function: $Y = K^{0.3}L^{0.7}$.

1. Show that this production function has constant returns to scale.
2. Derive the “intensive” form of the production function: y in terms of k , where $y \equiv \frac{Y}{L}$ and $k \equiv \frac{K}{L}$.
3. If this economy doubles its amount of capital per worker, by what proportional factor does output per worker increase? Does output per worker more than double, double, or less than double? How is this consistent with constant returns to scale?