

8. (8 points) (a) It is a fact from economics that the average cost $C(q)/q$ of producing $q > 0$ units of a quantity is minimized when this average cost is equal to the marginal cost. Show analytically why this is so.

(b) Using the graph of $C(q)$ shown below, a typical cost function as in the text, indicate on the q -axis the value of q_0 which minimizes the average cost. Explain graphically why the average cost is equal to the marginal cost at this point.

