

Math 104/184 - Test 1 - Friday September 22, 2006

8. [17 marks] You are operating a monopoly firm and consultants have told you that the demand q for your product as a function of the price p you choose is

$$q(p) = 100 - \sqrt{p}$$

- a) [2 marks] Give ranges on p , q which would typically be imposed in considering alternate pricing strategies.

- b) [4 marks] Give your revenue as a function of p .

- c) [5 marks] Give p as a function of q and then express your revenue R as a function of q .

- d) [6 marks] Given that the cost of production $C(q) = 80000 + q^3$, compute the break-even points for your firm.