



In Class Exercises (ICE) - 10/6/00

The Barry Manilow fan club of Chapel Hill, NC, plan to produce official Barry Manilow T-shirts, and sell them for \$7 each. Inquiries to local T-shirt manufacturers indicate that the cost of producing q T-shirts will be given by

$$C(q) = 0.01q^3 - 0.6q^2 + 13q.$$

Assuming that the fan club is somehow able to sell every Barry Manilow T-shirt that they manufacture at a price of \$7 per shirt, how many T-shirts should they produce if they want to maximize profits? What will be their maximum profit?