Smith and Wesson have written a new managerial economics book for which they receive royalty payments of 15 percent of total revenue from sales of the book. Because their income is tied to revenue, not profit, they want the publisher to set the price so that the total revenue is maximized. However the publishers objective is maximum profit. If the total revenue function is TR=100,000Q-10Q^2 and the total cost function is TC=10,000+20Q+Q^2 determine A) the output rate that will maximize total royalty revenue and the amount of royalty income hat smith and Wesson would receive. B) the output rate that would maximize profit to the publisher. Based on this rate of output, what is the amount of royalty income smith and Wesson would receive? Compare the royalty income of smith and Wesson to that determined in part

Answer:

A) TR will be maximized if Q = 0, then TR = 100,000 and royalty = 100,000 x 0,15 = =15,000
B) TC will be minimum if Q = 0, then TC = 90,000 and royalty = 100,000 x 0,15 = = 15,000.