

### Question 1:



If the Congestion Charge program's objective is to maximize revenue, the single congestion charge that should be applied across both peak and non-peak hours is **\$8**. With this price in effect, the total level of emissions would be **45,846 g/km** and the total revenue achieved by the program would be **\$1,349 thousand**.

Following the same objective, if the program implemented a pricing strategy with the price for the non-peak period set at £7, the ideal price for the peak period would be **\$9**. With this pricing strategy in effect, the resulting revenue would increase to a total of **\$1,371,826** and the total emissions would decrease to a total of **37,110 g/km**. This result makes sense because less cars will decide to take the streets, given a higher peak price, making total emissions fall.

On the other hand, if the program shifts its objective to minimizing emissions rather than maximizing revenue, the pricing strategy must change. Contemplating the City's daily revenue requirement of £1.1 million and a non-peak period price of £7, the ideal price for the peak period would be **\$13**. With this strategy in effect, the revenue would decrease slightly to a total of **\$1,178,713** and the total emissions would be minimized to a total of **25,233 g/km**. The outcome makes sense because minimizing the emissions means raising the peak price to negatively influence the consumer of driving, which consequently reduces revenue.