

Provide a clear and organized presentation. Show all of your work and completely simplify your answer.

The demand q , in thousands, of a particular car windshield and its price p , measured in dollars, are related by:

$$p = 400 - 5q^2$$

The supply q , in thousands, of this windshield and its price p , measured in dollars, are related by:

$$p = 30q^2 + 3q$$

Determine the equilibrium quantity and price.