Equilibrium Calculation

Assume a linear demand function of the form: **Qd = 85 - 5P**

And a linear supply curve of the form: **Qs = -20 + 10P**

Calculate the equilibrium price and output

Answer

If the demand function is Qd = 85 - 5P and the supply function is Qs = -20 + 10P, then to calculate the equilibrium price and output, we need to put the functions equal to each other.

85 - 5P = -20 + 10P

Adding 5P to both sides, we get 85 = -20 + 15P

Therefore 15P = 105

Equilibrium Price P=7

To get the equilibrium output, we need to substitute this value into either the demand function or the supply function. If we choose the demand function Qd = 85 - 5P, then we get:

Qd= 85 - (5 x 7)

Qd = 85 - 35

Equilibrium output(quantity)   Qd = 50 units