"Answer on question #61154-Economics – Microeconomics"

(Urgent) Assume that the price in autarky for a product is 50. The world price is 30 and at this price local supply is 100000 and local demand is 200000. The local government imposes a tariff of 5, increasing the price to 35. At this new price, local supply is 120000 and local demand is 170000. Provide numbers for the following with explanation.

a) Change in consumer surplus (calculated how)

b)Change in producer surplus (calculated how)

c) Change in total welfare (calculated how)

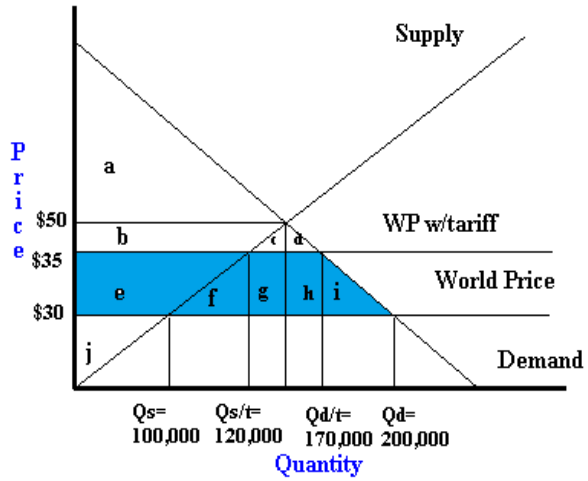
d) if for each 2000 units of local production 5 jobs are created how much does the creation of each job cost to society?

e) would be the results change if the local government chose a quota instead of the tariff, how much would the equivalent quota be?

Please provide the solution with the explanation that how you calculated everything and with a graph.

Solution

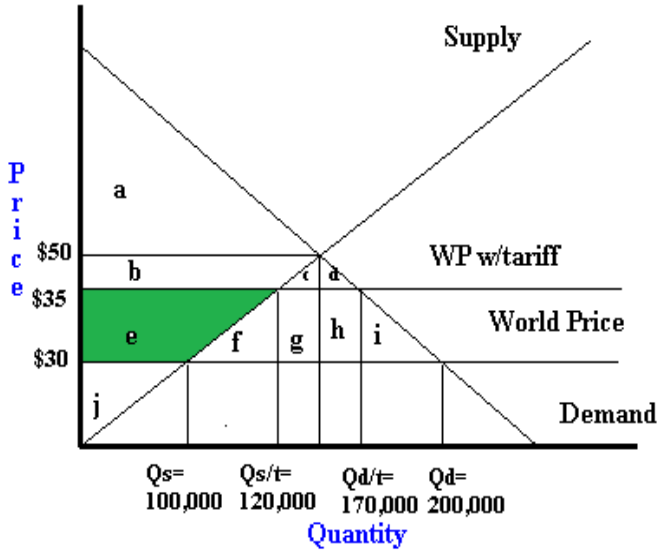
a)



Consumer Surplus before tariff = a + b + c + d + e + f + g + h + i
Consumer Surplus after tariff = a + b + c + d
Change in Consumer Surplus = Consumer Surplus after tariff - Consumer Surplus before tariff
Change in Consumer Surplus = (a + b + c + d) - (a + b + c + d + e + f + g + h + i)
Change in Consumer Surplus =-(e +f + g + h +i)
Where
(e + f + g + h) is area of rectangle
I is area of a right triangle

Change in Consumer Surplus =-{($35-$30)*170,000+($35-$30)*(200,000-170,000)/2}= -(850,000+75,000) =-925,000

b)



Producer Surplus before tariff = j

Producer Surplus after tariff = j +e

Change in Producer Surplus = Producer Surplus after tariff - Producer Surplus before tariff

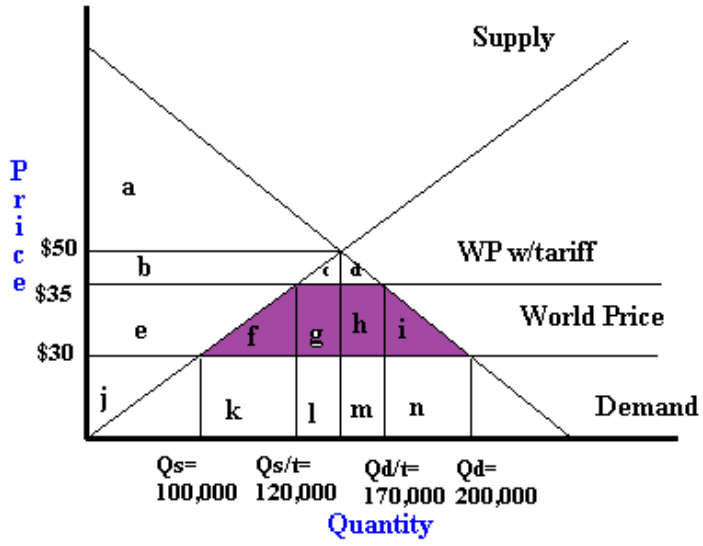
Change in Producer Surplus = j + e – J =e

Where

E is area of rectangular trapezoid

Change in Producer Surplus = (100,000+120,000)/2*($35-$30) = 550,000

c)



Total welfare =Consumer Surplus + Producer Surplus

Change in Total Welfare =Change in Consumer Surplus + Change in Producer Surplus

Change in Total Welfare =-(e +f + g + h +i) + e =-(f +g +h +i)

Where

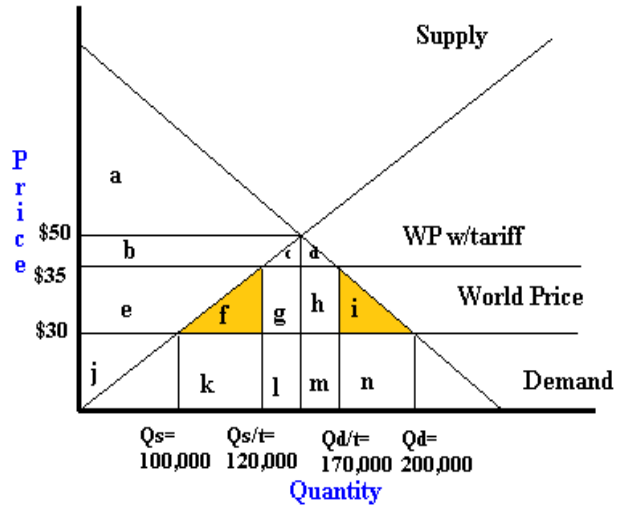
F and I are areas of right triangles

(g + h) is area of rectangle

Change in Total Welfare =- [($35-$30)*(120,000-100,000)/2 + ($35-$30)*(170,000-120,000) + ($35-$30)*(200,000-170,000)/2]

Change in Total Welfare=-(50,000+250,000+75,000) =-375,000

d)



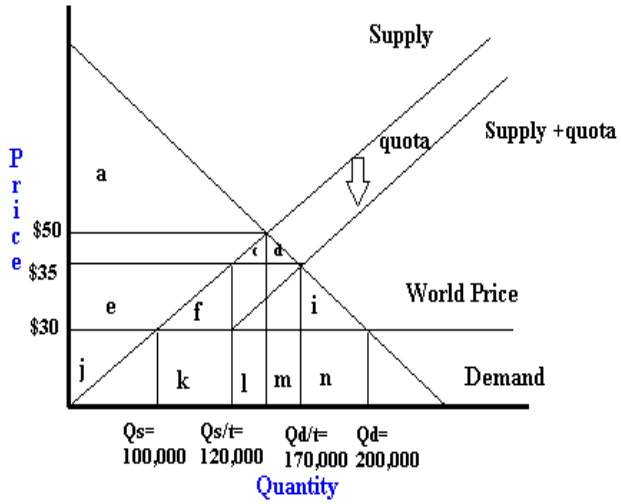
The implementation of the tariff is created (120,000-100,000)/2000*5 =50 new jobs

For society it will be cost change in deadweight loss divided by amount of the new jobs

Deadweight loss after tariff = f + i = ($35-$30)*(120,000-100,000)/2 + ($35-$30)*(200,000-170,000)/2 =50,000+75,000=125,000

Cost of creation each new job = Deadweight loss after tariff / Amount of new Jobs =125,000/50 = 2,500

e)



Effects of tariff:

- increasing price
- increasing domestic production
- decreasing consumer demand
- reducing import
- creating government revenue from tariff

Effects of quota:

- increasing price
- increasing domestic production
- decreasing consumer demand
- creating zero government revenue as it is quantitative limit of imports

The equivalent quota will be the amount of increasing local production from Qs to Qs/t.

It will be difference between Qs/t and Qs = 120,000-100,000 =20,000

Answer

a)-925,000
b) 550,000
c) -375,000
d) 2,500
e) 20,000