

Intro Micro | MiniExam C Demo

Question | Smoked Toffee

In recent years Hogsmeade has seen a proliferation of candy shops selling smoked toffees. The Demand (marginal benefit) curve and Supply (marginal cost) curve for smoked toffee can be represented by the following relationships.

$$D : P_b = 20 - \frac{1}{2}Q_d$$

$$S : P_s = Q_s$$

Due to the metabolic issues among the younger generation of wizards in the community resulting from the consumption of these high glicemic index treats, the Ministry of Magic imposed a 2 Galleon tax on the sale of smoked toffee.

MARKET CLEARING: $Q_s = Q_d$

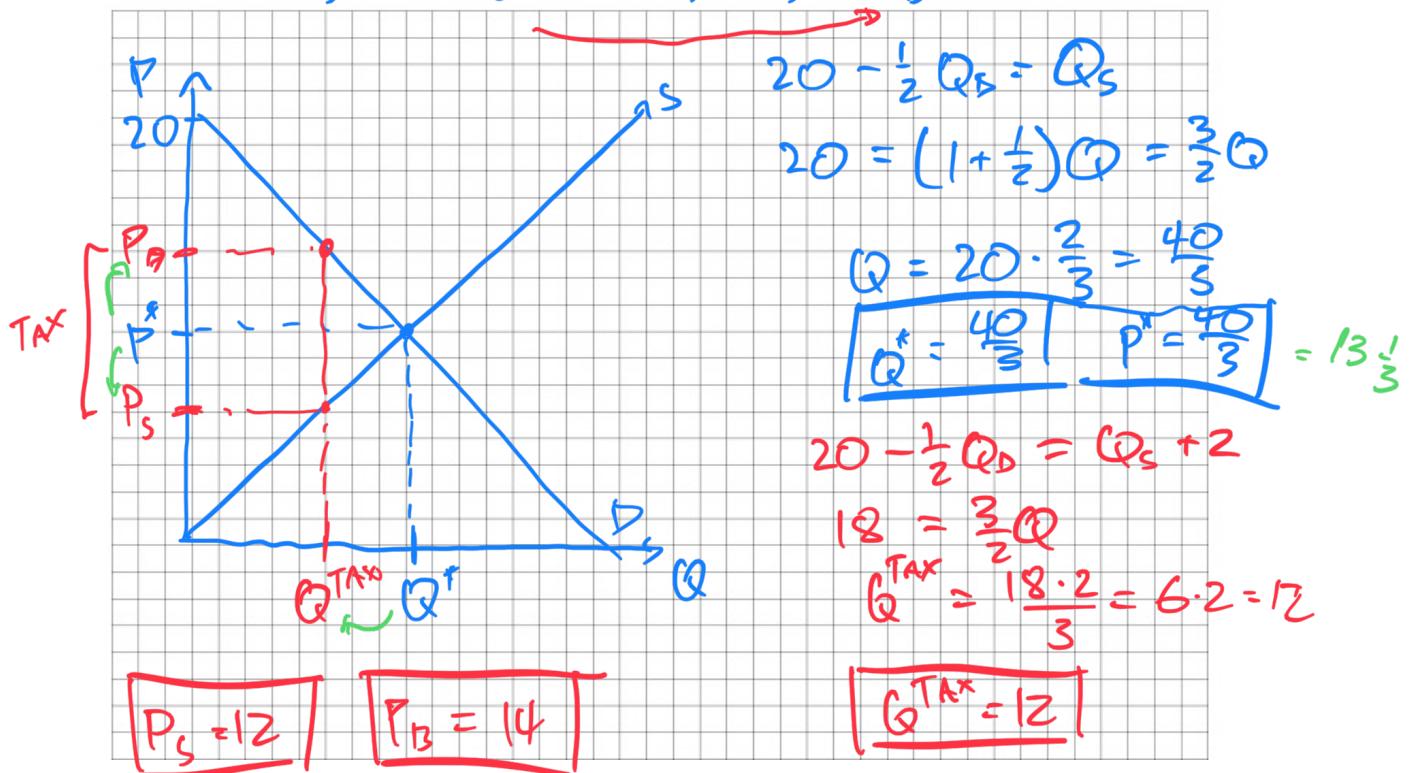
A | Tax Equilibrium

Use a graph and algebra to discuss the impact of the tax on the market. No need to include welfare measures here.

$$P_B = 20 - \frac{1}{2}Q_D$$

$$P_s = Q_s$$

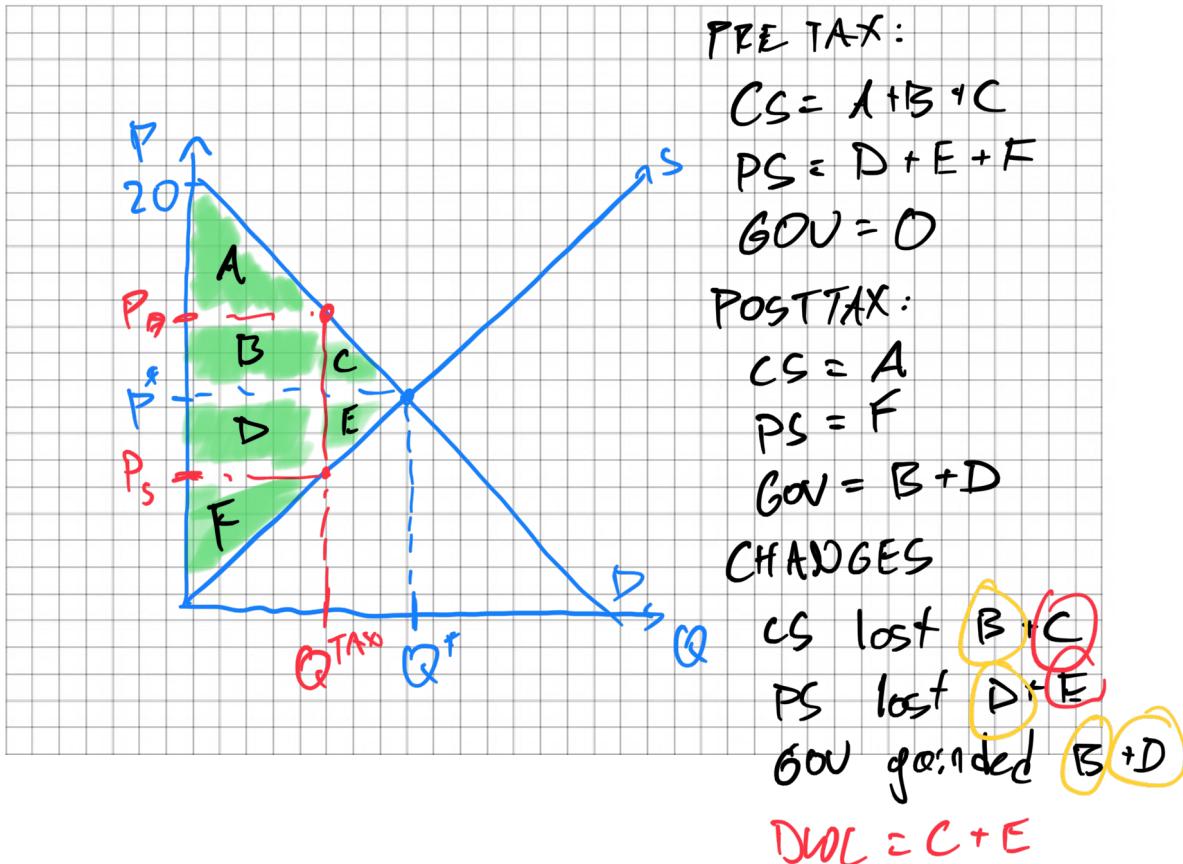
$$P_B = P_s + 2$$



Price for the buyer went up by $14 - 13\frac{1}{3} = \frac{2}{3}$. Price for the seller went down by $\frac{4}{3}$. Quantity went down.

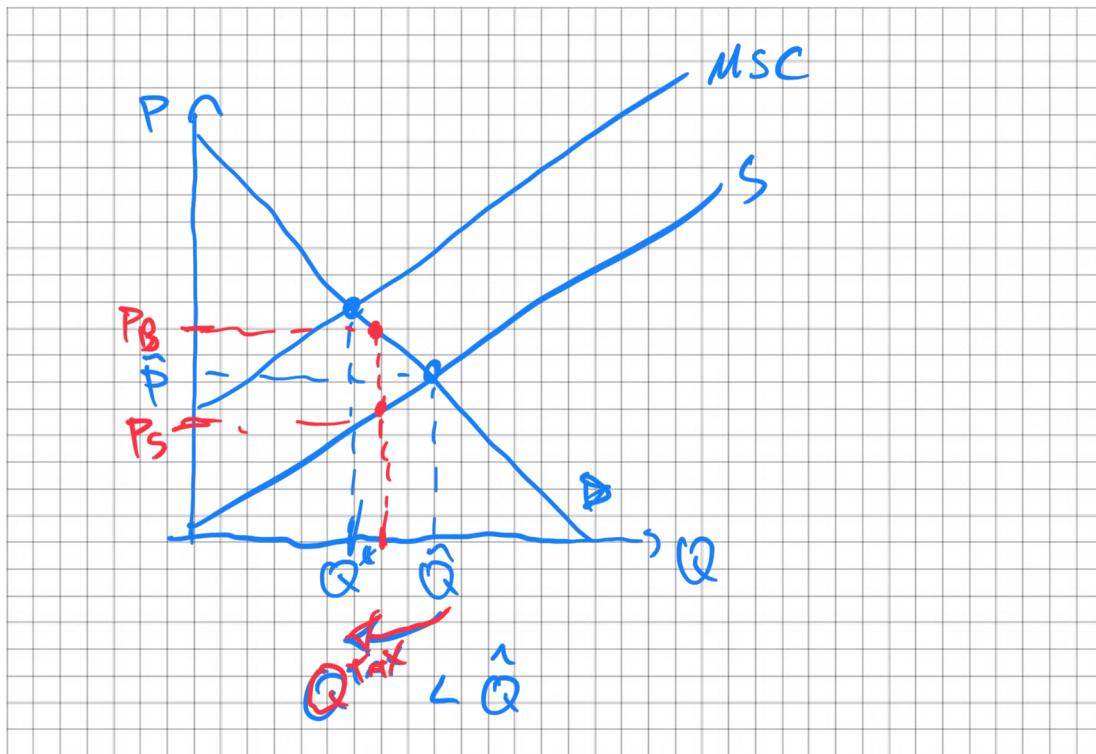
B | Post-Tax Welfare

Identify the post-tax welfare on the graph. Be sure to include how the welfare areas changed after the policy. No need to do any calculation here: I'm looking for a graphical and intuitive description of what happened to welfare after the policy. Be as clear as possible.



C | The Effects on Residents

This policy had a unintended consequence. The proliferation of smoked toffee makers meant the town saw a subsequent rise in smoke. Wood smoke is harmless at low levels, but can cause lung issues at the higher concentrations experienced in Hogsmeade. Use a graph to discuss the unintended effect the tax had on air quality. No need to discuss welfare.



Negative externalities can be remedied with a tax. This tax lead the unintended positive effect of limiting the externality.

If the externality was 2 gallons, the tax would correct the externality.