ENVIRON 805K Environmental Economics Quiz 1

Each sub-question is worth of 10 points. The quiz is for 20 minutes. You don't need to derive the final numbers.

1. Please describe the four conditions for a competitive market.

2. How to classify the category of a good by its excludability and rivalry?

3. The total damage of air pollution to adults is $4p$ and the total damage to kids is p^2, where p is the pollution level. What is the aggregate marginal damage for the public bad?

4. Suppose the demand function for electricity is $Q^d = 12 - 4P$ and the supply function is $Q^s = 2P$. Quantity is measured by kWh and price is measured by USD. Please answer the following questions:

   (a) What is the equilibrium price and quantity?

   (b) If the government imposes a tax of \$1/kWh, what's the change of consumer, producer and total surplus?

   (c) What is the incidence of the tax?