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Econ 1101
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1. **Pat and Kris are roommates. They spend most of their time studying (of course), but they leave some time for their favorite activities: making pizza and brewing root beer. Pat takes 4 hours to brew a gallon of root beer and 2 hours to make a pizza. Kris takes 6 hours to brew a gallon of root beer and 4 hours to make a pizza.**

   1. **What is each roommate's opportunity cost of making a pizza? Who has the absolute advantage in making pizza? Who has the comparative advantage in making pizza?**

   Pat's opportunity cost of making pizza is 1/2 gallon of root beer because she can brew 1/2 gallon in the time (2 hours) required to bake the pizza. Pat has an absolute advantage in making pizza. She can bake one in two hours, while Chris needs four hours. Kris's opportunity cost of making pizza is 2/3 gallons of root beer, because she can brew 2/3 gallons in the time (4 hours) required to bake the pizza. Since Pat's opportunity cost of making pizza is lower than Chris's, Pat has a comparative advantage in making pizza.

   2. **If Pat and Kris trade foods with each other, who will trade away pizza in exchange for root beer?**

   Pat will trade pizza in exchange for kris's root beer because she has a comparative advantage in making pizza than kris does.

The price of pizza can be expressed in terms of gallons of root beer. What is the highest price at which pizza can be traded that would make both roommates better off? What is the lowest price? Explain.

The trade price is the difference between the opportunity cost and the market price. The equivalent amount of root beer for one pizza is between 3/6 = 0.5 gallon and 2/3 = 0.66 gallon. As a result, the cheapest pizza costs 0.5 gallons of root beer, while the most expensive pizza costs 0.66 gallons of root beer.