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Practice Set 11

Labor Market & Trade

This set contains problems for your own practice. It is highly recommended to work on the problems on your own. Do not just read the provided solutions. Instead, try to solve the problems and use the solutions only when you cannot continue on your own. Reading problems that someone else has solved has the same value for your preparation like watching someone else running a marathon on TV and then expecting to be able to run it, too. If you have questions on this set, please ask your section's teaching assistant.

1. A firm produces firfirikia. The price of one firfiriki is 20 dollars. The firm has 3 machines. The production function of the firm is $Q = 3 \cdot K \cdot \sqrt{L}$, where K is the number of machines, L is the number of workers and Q is the quantity of firfirikia. The wage for the employment of one worker is 50 dollars. How many workers will this firm hire?

2. If *Japan* dedicates its entire production capacity to producing *rice,* it can produce 100 units and if it dedicates it to the production of *electronics*, it can produce 150 units. If *India* dedicates its entire production capacity to producing *rice*, it can produce 70 units and if it dedicates it to the production of *electronics*, it can produce 80 units.
   (a) Find which country has the *absolute advantage* in which product.
   (b) Find which country has the *comparative advantage* in which product.
   (c) Find the range of feasible *terms of trade* for which both countries would agree to trade.
   (d) Calculate how much India and Japan could consume if trade is not allowed and each country dedicates half of its resources to the production of rice and the other half to the production of electronics.
   (e) Assume that the actual terms of trade are 1.35 units of electronics per unit of rice, India needs to consume 38 units of rice and Japan needs to consume 77 units of electronics. Show that trade can allow the two countries to consume more from both goods than by not trading.