THE PPF, COMPARATIVE ADVANTAGE, AND GAINS FROM SPECIALIZATION.

1. To answer the next 7 questions, suppose that a small island economy has 100 Irish workers and 200 British workers. In a single day, an Irish worker can either catch 30 fish or 10 lobster. A British worker can catch either 20 fish or 5 lobster.
1. Who has the comparative advantage in lobster production?
2. Who has the comparative advantage in fish production?
3. Draw the PPF for this economy using the graph provided on the attached page. Be sure to indicate the numerical values of the vertical and horizontal intercepts and the values associated with the "kink" in the PPF.
4. Assuming the economy is organized efficiently and produces 300 fish, what is the maximum number of lobsters that can be caught in a day?

If the economy is organized efficiently and produces 300 fish,
5. How many fish will be caught by Irish workers?
6. How many fish will be caught by British workers?
7. A combination of 1000 lobsters and 4500 fish is:
a. technologically efficient.
b. technologically inefficient.
c. unattainable without additional resources or better technology.
8. If all the Irish and British divided their time equally between lobster and fish production, how many fish and lobsters would be produced?
9. Compared to your answer in (8), how much could fish production be increased without reducing lobster production?

To answer the next 5 questions, suppose that the island of Crete has 100 German workers and 200 French workers. In any given day, each German worker can produce either 2 straw hats, or gather 50 pounds of bananas whereas a French worker can produce either 3 straw hats or gather 60 pounds of bananas.

10. Who has the comparative advantage in straw hats?
11. The opportunity cost of a hat is ______ when hat production is between 0 and _________.
12. The opportunity cost of a hat will increase when hat production goes beyond _________.
13. Suppose that the economy produces 240 hats. What is the maximum amount of bananas it can produce if it organizes production efficiently?

14. Suppose the economy produces 240 hats and maximizes the production of bananas. To achieve this outcome, the Germans will produce ________ hats and _______ bananas, while the French will produce _______ hats and _______ bananas.

ALLOCATIVE EFFICIENCY.

Consider the diagram below representing the marginal cost and benefit of electricity to answer the next 3 questions.

15. If the economy produced 5500 kilowatts of electricity per day, it would be producing (more than, less than) the efficient level and it would probably be wise for government to (tax, subsidize) the production of electricity.

16. If there is a technological innovation that reduces the cost of producing electricity, the \((MC, MB)\) curve will shift (up, down). This, in turn, will cause the socially efficient (or allocatively efficient) level of electricity production to (increase, decrease).

17. If the temperature rises in the economy and the value that people receive from electricity to cool their homes rises, the \((MB,MC)\) curve will shift (up, down) and this will cause the socially efficient (or allocatively efficient) level of electricity production to (rise, fall).
Answers

1. Irish
2. British
3. 
   - Fish: 7000, 4000
   - Lobster: 1000, 2000
4. 1925
5. 0
6. 300
7. c
8. 3500 fish, 1000 lobsters
9. 500 fish
10. French
11. 20 pds of bananas, 600
12. 600
13. 12,200
14. 0; 5000; 240; 7200
15. more than; tax
16. MC, down, increase
17. MB, up, rise.