

Unit 1 Progress Check: FRQ

1. **Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.**

Two countries, Marland and Teckana, can produce either clothing or food using all their available resources at constant opportunity cost. The table below shows the daily production of clothing or food in Marland and Teckana.

	Clothing	Food
Marland	120	20
Teckana	80	20

- (a) Which country has the absolute advantage in producing food? Explain.
- (b) Which country has the comparative advantage in producing food? Explain using numbers.
- (c) Assume the two countries specialize based on their comparative advantage. If the two countries engage in trade and one unit of food is exchanged for 5 units of clothing, will these terms of trade be mutually beneficial? Explain.
- (d) Suppose Teckana invented new equipment to only increase the production of clothing.
- (i) Draw a correctly labeled graph of Teckana’s initial production possibilities curve, with clothing on the horizontal axis and food on the vertical axis. Plot the numerical values above on the graph.
- (ii) Show the effect of the new equipment on Teckana’s production possibilities curve.
- Respond to all parts of the question.

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2. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to “Calculate,” you must show how you arrived at your final answer.

The table below shows the marginal utilities in utils that Sarah derives from consuming two goods, snacks, and movies.

Quantity of Snacks	Marginal Utility of Snacks	Quantity of Movies	Marginal Utility of Movies
0	-	0	-
1	20	1	50
2	18	2	35
3	15	3	24
4	12	4	20
5	10	5	15
6	8	6	10

Sarah has a limited weekly income of 50, and she spends it all on snacks and movies. Assume the price of snacks is 5 per unit, the price of a movie ticket is \$10, and Sarah is a utility-maximizing consumer.

- (a) Would Sarah be able to consume 3 snacks and 5 movies? Explain using numbers.
- (b) How many snacks and movies will Sarah consume to maximize her utility? Explain using marginal analysis.
- (c) Calculate the total utility Sarah will receive from consuming the utility-maximizing combination of snacks and movies indicated in your answer in part (b). Show your work.
- (d) Suppose Sarah’s income increases to \$60.
- (i) What will happen to the marginal utility per dollar spent on movies?
- (ii) Will Sarah be better off buying two more snacks or one more movie ticket? Explain using numbers.
- Respond to all parts of the question.