

Unit 1 Progress Check: FRQ

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.

Assume gadgets are sold in a competitive market, the equilibrium price is \$6, and the equilibrium quantity is 500 units.

(a) Using the numerical values above, draw a correctly labeled graph of the market for gadgets and show each of the following.

(i) The equilibrium price

(ii) The equilibrium quantity

(b) At a price of \$8 per unit, will there be a surplus or a shortage in the market? Explain.

(c) Assume gadgets now become more popular. On your graph in part (a), show the effect of the increase in gadgets' popularity on the equilibrium price and quantity of gadgets.

(d) Assume instead there is an increase in the price of tin, a major input in producing gadgets. What will be the effect of an increase in the price of tin on the market for gadgets?

(e) If both changes in part (c) and part (d) occurred simultaneously, will the equilibrium quantity of gadgets increase, decrease, remain unchanged, or be indeterminate? Explain.

1. *Respond to all parts of the question.*

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Zeetopia and Freshland are two small tropical islands that use the same amounts of resources to produce mangoes and coconuts as shown in the table below.

	Coconuts (in tons)	Mangoes (in tons)
Zeetopia	50	60
Freshland	50	30

- (a) Which island has an absolute advantage in producing coconuts? Explain.
- (b) Which island has a comparative advantage in producing coconuts? Explain.
- (c) Assume Zeetopia and Freshland decide to specialize according to their comparative advantages and 1 ton of coconuts is exchanged for 1 ton of mangoes. Are specialization and trade under these terms beneficial to both Zeetopia and Freshland? Explain.
- (d) Assume the two islands experience constant opportunity costs in the production of the two products. Draw a correctly labeled graph illustrating Zeetopia’s and Freshland’s production possibilities, showing coconuts on the horizontal axis and mangoes on the vertical axis. Plot the numerical values from the table above on your graph.
- (e) On your graph in part (d), show a combination of coconuts and mangoes, labeled as point X that is unattainable for Freshland but feasible and inefficient for Zeetopia.

2. *Respond to all parts of the question.*
