



1.3.5 Practice: Analyzing a Production Possibilities Curve

Practice

Economics

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Date: _____

Section 1: Creating a Production Possibilities Curve

Complete items 1 through 5. Work through the pages of this activity if you need to review production possibilities curves. Feel free to jump back to the previous activities in the lesson if you need to review major concepts.

1. Imagine products you might create in a given amount of time: poems, baked goods, online videos, movie reviews, video game mods, scarves, drawings, or anything else you can picture yourself making as part of a small, one-person business. Choose and describe two such products. They will be product 1 and product 2. (1 point)

I'd make hoodies and phone cases. I like designing both, and they're easy to sell online.

2. What are the inputs – the scarce resources – required to create your two products? (1 point)

I'd need time, fabric or plastic, design ideas, a laptop or ipad with pencil, and energy to make them.

3. Come up with a set work period, such as one day or one week. State how many of product 1 you can make in that period if you create the product type exclusively. Then state how many of product 2 you can make in the same period if you work on *that* type of product exclusively. (1 point)

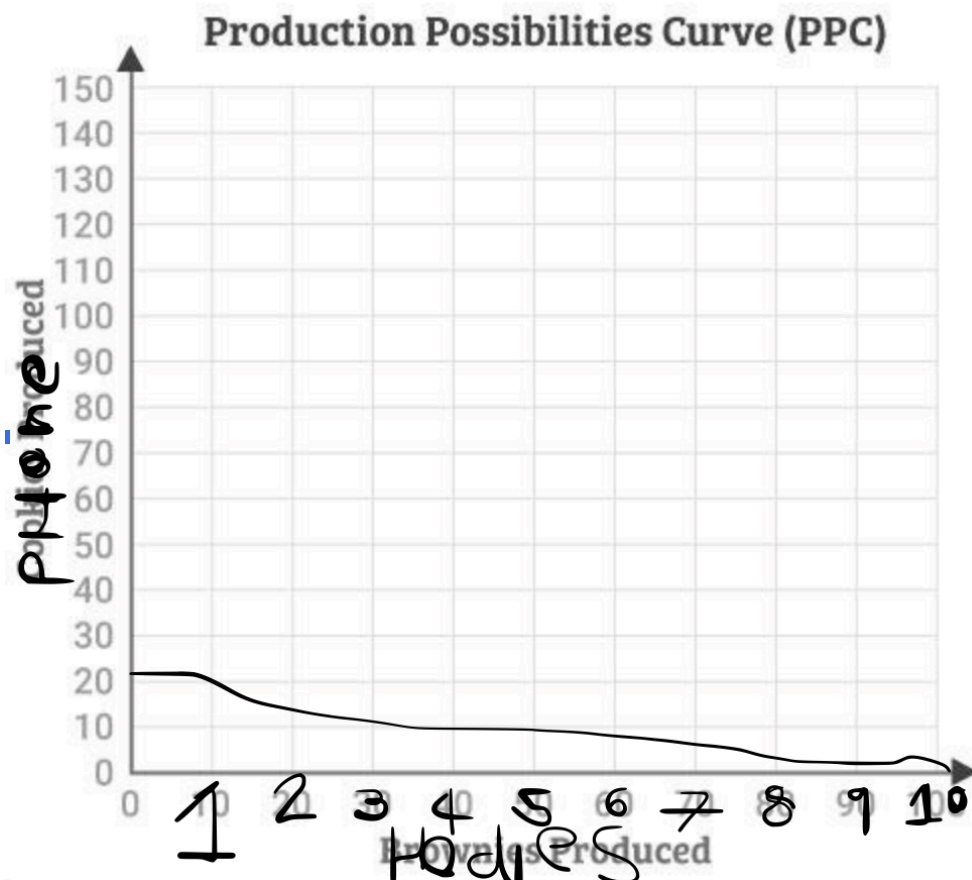
In 1 week, I can make 10 hoodies if I only do that. Or 20 phone cases if that's all I do.

4. Fill out the table. Under the first column, list your two products. Then refer to question 3 to fill out columns A and E. Under column A, write down how many of product 2 you can create if you make zero of product 1. Under column E, write down how many of product 1 you can create if you make zero of product 2.

Then, in columns B through D, do your best to split the difference. Under column B, for example, if you make slightly fewer of product 1, how many of product 2 can you create in the same period? Estimate if needed. (2 points)

	A	B	C	D	E
Product 1:	0	2	5	7	10
Product 2:	20	15	10	5	0

5. Now create your production possibilities curve, based on the information in the table you just filled out. Use the chart shown as a model, but note that your numbers and your curve will be different. Depending on the numbers you wrote in your table, your "curve" may even look more like a slant. (2 points)



Section 2: Analyzing a Production Possibilities Curve

1. In what way does your production possibilities curve demonstrate the concept of scarcity? Support your answer with examples from your imaginary business. (2 points)

The graph shows scarcity because I can't make unlimited hoodies and phone cases at the same time. Like, if I spend all week making hoodies, I can't make any phone cases. That's because I don't have endless time, materials, or money.

2. In what way does your production possibilities curve demonstrate the concepts of trade-off and opportunity cost? Support your answer with examples from your imaginary business. (2 points)

It shows tradeoffs and opportunity cost because if I make more of one, I have to give up some of the other. Like if I choose to make 2 more hoodies, I might not be able to make 4 phone cases. That's the cost of choosing one thing over the other.

3. What is the opportunity cost if you shift target production from one point on the curve to another? A shift from A to B, for example, might result in an opportunity cost of 5 of product 1. In the table, state the opportunity cost for each of the shifts listed. In addition to providing a number, be sure to specify which type of product is being given up. (1 point)

Shift	Opportunity cost
From B to C	5 hoodies given up
From A to C	10 phone cases given up
From D to B	3 phone cases given up

4. Where on the production possibilities curve do the quantity of product 1 and the quantity of product 2 come the closest in number of products produced? (2 points)

Point C is where the hoodie and phone case numbers are closest. It's balanced between the two products.

5. Draw a vertical line from point B to the bottom of the graph. Then draw a horizontal line from point D to the left side of the graph. If your actual productivity was represented by the intersection of these two lines, what would it suggest about your efficiency? Under what circumstance might your productivity appear at this place on the chart, given what you know about your imaginary business and its resources? (2 points)

That spot would mean I'm not using my time or materials efficiently. Maybe I got distracted or ran out of some supplies. It shows I'm working below my full ability even though I have enough resources.

6. Come up with a number of products (including both product 1 and product 2) that is impossible given your limited resources. Where exactly would these two numbers intersect on the production possibilities curve? (2 points)

If I try to make 15 hoodies and 20 phone cases in one week, that's impossible. That point would be outside the curve because I can't do both with the time and stuff I got.

7. Describe at least two capital investments that would increase growth for your business. In other words, how might you expand the frontier of your production possibilities curve? Explain how your capital investments would help, and classify each investment by category: facilities, equipment, labor, marketing, or expansion. (2 points)

One investment would be getting a better sewing machine (equipment) so I can make hoodies faster. Another would be hiring a part-time helper (labor) so I can work on phone cases while they work on hoodies. Both would help me make more stuff and grow the business.

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