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## Production possibility frontier worksheet

### Production possibility frontier revision worksheet answers. What is production possibility frontier. Production possibility frontier worksheet answers.

Production Possibilities Frontier (PPF) Worksheet

Name \_\_\_\_\_ Per \_\_\_\_\_

1. You currently have a job at the Texas Roadhouse and each week your take-home salary is \$1500.00. As a high-school senior, you only two concerns are saving money for college and spending money to have fun. Complete the following chart and graph the results to create a PPF curve for this scenario.

College Savings	Having Fun
\$150	
\$125	
\$100	
\$75	
\$50	
\$25	
\$0	

2. In order to save \$10 more for college you have to give up \$\_\_\_\_ spent on fun. That means the opportunity cost of college savings is \_\_\_\_\_.

3. A bakery can make 150 donuts or 150 hot dog buns per hour or some combination of both.

Donuts	Hot dog buns
0	150
50	140
100	120
150	90
180	50
150	0

4. Is it possible to produce 50 of each? \_\_\_\_\_

5. Why would you want to avoid that? \_\_\_\_\_

6. What is the opportunity cost of the 150<sup>th</sup> donut? \_\_\_\_\_ hot dogs

7. What is the opportunity cost moving from 120 hot dog buns to 140 hot dog buns? \_\_\_\_\_

How could this bakery shift its PPF out? \_\_\_\_\_

8. How could it change its land? \_\_\_\_\_

9. How could it change its labor? \_\_\_\_\_

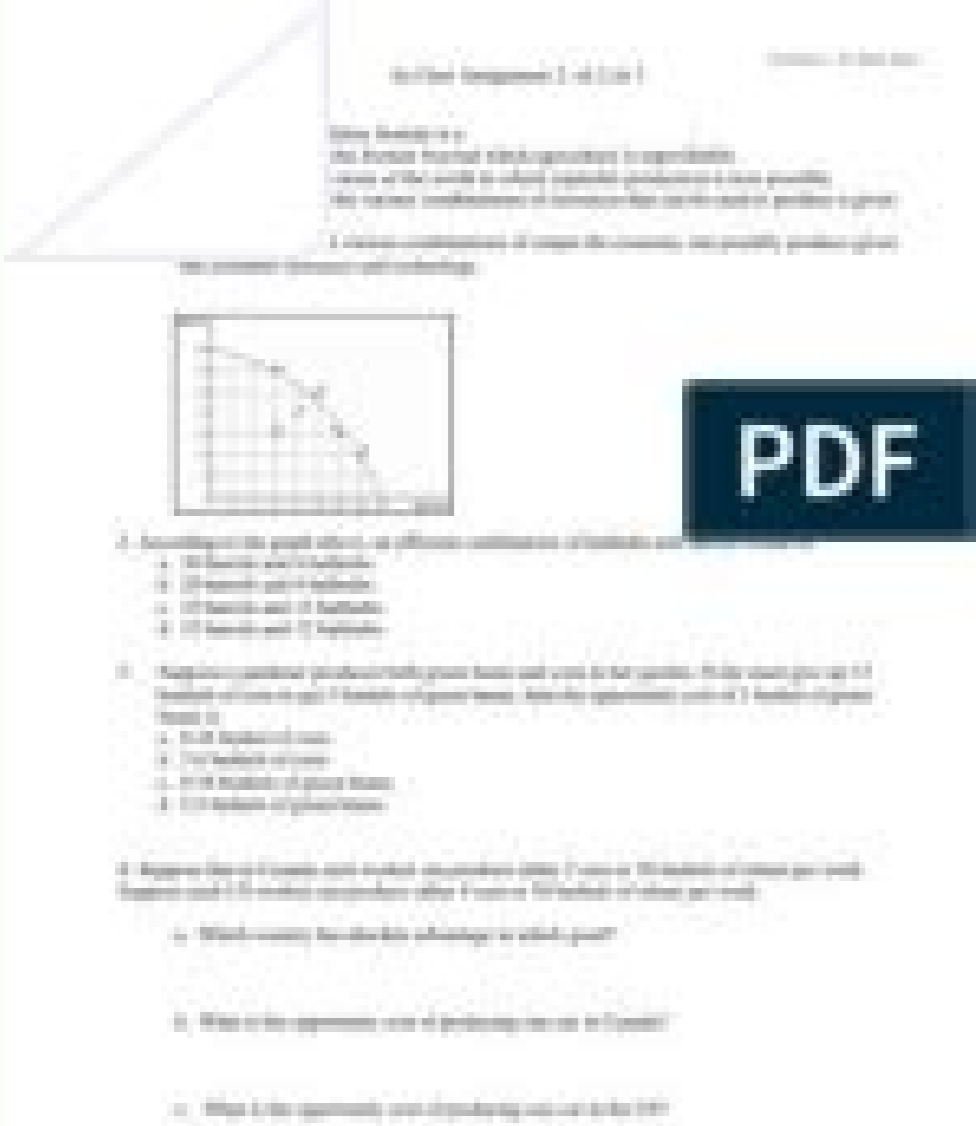
10. How could it change its capital goods? \_\_\_\_\_

11. Why do economists look at changes like in the above PPF graphs?

### Production possibility frontier worksheet 1.2.1 answers. Production possibility curve frontier worksheet. What does production possibility frontier mean.

If you're seeing this message, it means we're having trouble loading external resources on our website. If you're behind a web filter, please make sure that the domains \*.kastatic.org and \*.kasandbox.org are unblocked. This complete lesson examines how the production possibilities curve (PPC) models the trade-offs between two alternative goods. It illustrates the concepts of efficiency, economic growth, and opportunity cost, and when paired with another PPC, this model allows us to calculate the gains made from specialization and trade. The lesson explores how comparative advantage, not absolute advantage, is the basis for this benefit and shows how even people who enjoy an absolute advantage still benefit from it. If you're seeing this message, it means we're having trouble loading external resources on our website. If you're behind a web filter, please make sure that the domains \*.kastatic.org and \*.kasandbox.org are unblocked. Last updated 20 April 2022

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The entire graph is sometimes referred to as the production possibility curve. The non-profit could provide 10 textbooks and 10 computers, but this is not using all of its resources. This would be represented by a plot beneath the curve. A plot would be placed above the curve in the frontier area if the company wanted to give more than its resources provided, such as 85 textbooks and no computers or 42 textbooks and 10 computers—it simply can't do it based on available resources. This technique can be used by economists to determine the set of points at which a country's economy is most efficiently allocating its resources to produce as many goods as possible. If the production level is on the curve, the country can only produce more of one good if it produces less of some other good. If the economy is producing less than the quantities indicated by the curve, this signifies that resources are not being used to their full potential. In this case, it is possible to increase the production of some goods without cutting production in other areas. The production possibility frontier demonstrates that there are limits on production, given that the assumptions hold. Therefore, each economy must decide what combination of goods and services should be produced to attain maximum resource efficiency. Imagine a national economy that can produce only two things: wine and cotton. If points A, B, and C are plotted on a curve, it represents the economy's most efficient use of resources. Image by Sabrina Jiang © Investopedia 2020 For instance, producing five units of wine and five units of cotton (point B) is just as attainable as producing three units of wine and seven units of cotton. Point X represents an inefficient use of resources, while point Y represents a goal that the economy simply cannot attain with its present levels of resources. As we can see, for this economy to produce more wine, it must give up some of the resources it is currently using to produce cotton (point A). If the economy starts producing more cotton (represented by points B and C), it would need to divert resources from making wine and, consequently, it will produce less wine than it is producing at point A. Moreover, by moving production from point A to B, the economy must decrease wine production by a small amount in comparison to the increase in cotton output. But if the economy moves from point B to C, wine output will be reduced by about 50%, while the cotton output only increases by about 75%. Keep in mind that A, B, and C all represent the most efficient allocation of resources for the economy. The nation must decide how to achieve the PPF and which combination to use. For example, if more wine is in demand, the cost of increasing its output is proportional to the cost of decreasing cotton production. Markets play an important role in telling the economy what the PPF should look like. Consider point X in the figure above. If a country is producing at point X, it means its resources are not being used efficiently—that is, the country is not producing enough cotton or wine, given the potential of its resources. On the other hand, point Y, as we mentioned above, represents an unattainable output level. An economy can only be produced on the PPF curve in theory. Economies constantly struggle to reach an optimal production capacity. Scarcity always forces an economy to forgo some choice in favor of another. The only way for the curve to move outward to point Y is if there were an improvement in cotton and grape harvesting technology because the available resources—land, labor, and capital—generally remain constant. As output increased, the PPF curve would be pushed outwards. A new curve, represented in the figure on which Y would fall, would show the new optimal allocation of resources. When the PPF shifts outwards, it implies growth in an economy. When it shifts inwards, the economy is shrinking due to a failure to allocate resources and optimal production capability. A shrinking economy could result from a decrease in supplies or a deficiency in technology. The Pareto Efficiency, a concept named after Italian economist Vilfredo Pareto, measures the efficiency of the commodity allocation on the PPF. The Pareto Efficiency states that any point within the PPF curve is inefficient because the total output of commodities is below the output capacity.

# Production Possibilities Practice

1. Label the following areas on the curve above:  
 A - where the economy is producing most efficiently  
 B - where there is an underutilization of resources  
 C - where it is impossible to produce  
 D - the production possibilities frontier

2. Can the country efficiently produce 5 million bookshelves and 12 million cars? Why or why not? NO, BECAUSE THAT POINT IS LOCATED BELOW THE CURVE, WHICH IS UNDERUTILIZATION.

3. Which of the following would be the best possible production combination of bookshelves and cars?  
 A. 1 million bookshelves and 9 million cars  
 B. 8 million bookshelves and 6 million cars  
 C. 10 million bookshelves and 14 million cars

4. Illustrate what happens when a country's resources increase.

5. Illustrate what happens when a country's resources to produce ONLY Product A increase.

6. Illustrate what happens when a country loses some of its resources to produce ONLY Product B.

Conversely, any point outside the PPF curve is impossible because it represents a mix of commodities that will require more resources to produce than are currently obtainable. Therefore, in situations with limited resources, the only efficient commodity mixes lie along the PPF curve, with one commodity on the X-axis and the other on the Y-axis. An economy may be able to produce all of the goods and services it needs to function using the PPF as a guide. However, this may lead to an overall inefficient allocation of resources and hinder future growth when the benefits of trading with other countries are considered. There are four common assumptions in the model: The economy is assumed to have only two goods that represent all of the goods and services it needs to function; the supply of resources is fixed or constant; technology and techniques remain constant; all resources are being used efficiently and fully. The PPF demonstrates whether resources are being used efficiently and fully when everything else remains constant. Thus, the variables can be changed to see how the curve reacts, letting you observe different outcomes. The simplest method is to use Excel or Google Sheets. Fill two columns with two variable values, highlight the data, and use the chart wizard. Create an XY scatter plot chart and label the X and Y axes. Because the PPF is a curve based on the data of two variables representing resources between two goods, the data can be manipulated to observe how scarcity, growth, inefficiency, efficiency, and other factors can affect production. The PPF identifies the options when making a decision. When you decide on one action, you lose the opportunity the other action provides. Thus, there is an opportunity cost; the PPF curve plots this. The production possibilities curve illustrates the maximum possible output for two products when there are limited resources. It also illustrates the opportunity cost of making decisions about allocating resources. Businesses and economists use the PPF to consider possible production scenarios by changing resource variables. The PPF allows businesses to learn how variables influence production or decide which products to manufacture. Economists can use it to learn how much of a specific good can be produced in a country while not producing another good to analyze economic efficiency levels and growth.

Cars (millions)	Bookshelves (millions)
0	10
1	9.5
2	8.5
3	7
4	5.5
5	4
6	2.5
7	1
8	0