Guns or Butter

Economists often speak of the way a society allocates its resources between military and consumer spending as a method for choosing guns or butter. Of course, guns represent resources allocated to a nation’s defense; butter represents resources allocated for consumer goods. Economists use the phrase “guns or butter” because scarcity mandates that we choose how we use available resources.

Illustrate the relationship between guns and butter as directed in question 1.

1. Use the following data to draw a production possibilities frontier (PPF) on the grid shown.

<table>
<thead>
<tr>
<th>Guns</th>
<th>Butter</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>

Use the graph you created in question 1 to answer questions 2-8.

2. Can this economy produce 6 units of guns and 12 units of butter? Explain.

3. Can this economy produce 11 units of guns and 11 units of butter? Explain.

4. What does this PPF represent?

5. How does this PPF illustrate the concept of scarcity?
6. How does this PPF illustrate the concept of opportunity cost?

7. If the economy is presently producing 0 units of guns and 15 units of butter, what is the opportunity cost of increasing the production of guns from 0 units to 3 units?

8. If the economy is presently producing 12 units of guns and 4 units of butter, what is the opportunity cost of increasing the production of butter from 4 units to 11 units?

The Production Possibilities Frontier and Efficiency

The PPF represents what an economy can produce when it is using all its resources efficiently. As long as the economy is producing at a point on its PPF, it is producing at an efficient level and using all its resources.

When an economy is already using all its resources efficiently, it cannot use the same resources to produce something beyond, or outside, its PPF. Therefore, economists say that a point outside an economy’s PPF is unattainable.

An economy can produce at a point inside its PPF. However, if an economy is producing at a point inside its PPF, then either the economy is not using all its resources or it is using them inefficiently. Economists label a point inside the PPF underutilization because such a point indicates the economy is underutilizing its resources.

Efficiency, unattainability, and underutilization are shown on the “PPF and Efficiency” graph above. Use the graph to answer questions 9-11.

9. The point that represents an unattainable point is _______.

10. The point that represents underutilization is _______.

11. The economy that is using all its resources efficiently is producing at point _______.

Shifts in the Production Possibilities Frontier

The location of the PPF for an economy is determined mostly by the amount of resources available and the level of technology in the society. If more resources become available or the level of technology increases, more goods and services can be produced and the PPF will shift to the right (outward). If the amount of resources diminishes, the economy can no longer produce at previous levels and the PPF will shift to the left (inward).
Write your answers to questions 12 and 13 in the space provided.

12. What two things would cause the PPF of an economy to shift to the right (outward)?

13. What would cause the PPF of an economy to shift to the left (inward)?

Use the “Shifts in the PPF” graph to answer questions 14-19. Assume that the PPF begins at the location labeled “C”. Read question 14 and determine the direction (left or right) that the PPF will move from the location C in response to the event described. Then write the letter of the new location. Now read question 15 and determine the direction the PPF will move from the location you decided on in question 15. Then write the letter of the new location. Continue to determine the direction and location for each subsequent event.

14. The invention of the light bulb allows laborers to work later hours and introduces the midnight shift.
   Direction of Shift: ____________________  New Location of PPF: _____

15. A major drought makes much of America’s farmland unproductive.
   Direction of Shift: ____________________  New Location of PPF: _____

16. The baby boomer generation starts to retire, and millions leave the workforce.
   Direction of Shift: ____________________  New Location of PPF: _____

17. The invention of the Internet allows people to communicate and conduct business from anywhere.
   Direction of Shift: ____________________  New Location of PPF: _____

18. The government loosens immigration policies, allowing millions of skilled workers to enter the country.
   Direction of Shift: ____________________  New Location of PPF: _____

19. The invention of the cell phone allows people to communicate from remote locations.
   Direction of Shift: ____________________  New Location of PPF: _____

20. Some economists argue that unemployment is the main issue that should concern government officials, because unemployment represents underutilized resources. Which of the following situations best describes this view of unemployment?

   A. a point inside the PPF   B. a point outside the PPF   C. a point on the PPF curve