Saturday Trade-Offs

Use a production possibilities curve to explain workshop choices.

GE.1.4 "Illustrate a production possibilities curve to explain the concepts of choice, scarcity, opportunity cost, trade-offs, unemployment, productivity, and growth."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each pair of output numbers in the passage, circle the opportunity cost, and label the sentences explaining unemployment and growth U and G.

One Workshop, Two Jobs

1 At a neighborhood workshop, eight volunteers use the same rooms, tools, and Saturday hours to repair bicycles or assemble garden kits. The table shows the most they can make with those resources when every volunteer works efficiently. Each row is a possible choice on the production possibilities curve, or PPC. Scarce time makes producing the maximum of both goods impossible.

MAXIMUM SATURDAY OUTPUT

Bicycles repaired	Garden kits assembled
0	12
2	11
4	9
6	6
8	0

2 Moving from four repaired bicycles and nine garden kits to six bicycles and six kits costs three kits. Those three kits are the opportunity cost of choosing two more bicycles. This trade-off appears as the PPC slopes downward: more of one good requires less of the other when resources and productivity stay fixed.

3 Suppose the workshop makes four bicycles and six kits because some volunteers have no assigned work. That point is inside the PPC, showing unused labor, or unemployment. The output of six bicycles and eight kits lies beyond the curve, so it cannot be made with today's resources. Better tools for both jobs could raise productivity and shift the PPC outward.

2 ANSWER WITH EVIDENCE

Use the passage

1. If bicycles go on the horizontal axis and garden kits on the vertical axis, what are the PPC's two intercepts?

2. The workshop moves from four bicycles and nine kits to six bicycles and six kits. What does it gain, and what is the opportunity cost?

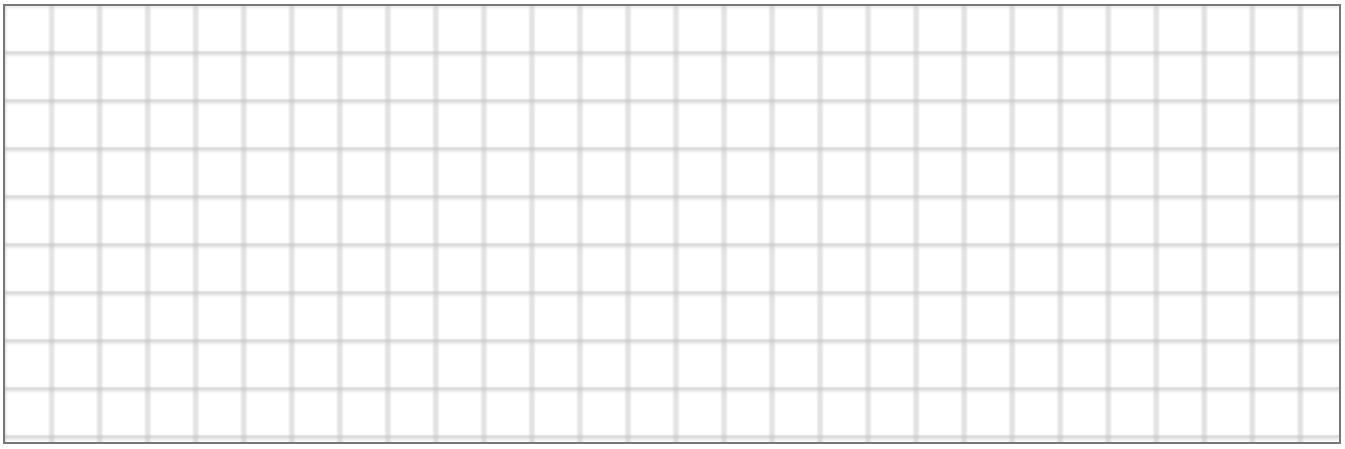
3. Where would the points (4 bicycles, 6 kits) and (6 bicycles, 8 kits) fall relative to the PPC? Explain each position.

4. If better tools increase productivity in both jobs, how would the PPC change?

3 YOUR TURN

Your own words

Choose two goods other than bicycles and garden kits. On the grid, label both axes, invent and plot two maximum-output intercepts and one maximum-output point between them, and draw a PPC through the points. Mark one point inside for unemployment and one outside as unattainable, add an outward arrow for growth, then write one sentence about the opportunity cost between two plotted points and one sentence about what could cause growth.



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PART 1 · READ AND MARK

Underline each pair of output numbers in the passage, circle the opportunity cost, and label the sentences explaining unemployment and growth U and G. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	If bicycles go on the horizontal axis and garden kits on the vertical axis, what are the PPC's two intercepts?	**(0, 12) and (8, 0).**
2	The workshop moves from four bicycles and nine kits to six bicycles and six kits. What does it gain, and what is the opportunity cost?	**It gains two repaired bicycles and gives up three garden kits. The three kits are the opportunity cost.**
3	Where would the points (4 bicycles, 6 kits) and (6 bicycles, 8 kits) fall relative to the PPC? Explain each position.	**(4, 6) is inside the PPC because volunteers are unused. (6, 8) is beyond the PPC because current resources cannot produce that combination.**
4	If better tools increase productivity in both jobs, how would the PPC change?	**It would shift outward because the workshop could produce more with its resources.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Sketch: The horizontal axis is hats, and the vertical axis is tote bags. A bowed PPC passes through (0, 12), (4, 9), and (6, 0). The point (3, 5) is marked inside for unemployment, (5, 11) is marked outside as unattainable, and an outward arrow is labeled growth. Written sentences: Moving from (0, 12) to (4, 9) costs three tote bags to make four hats. Better equipment for making both goods could shift the PPC outward.

Accept different axis choices in Part 2 if coordinates are adjusted consistently. For Your Turn, accept invented quantities when the interior point is below the drawn PPC, the unattainable point is above it, and the stated opportunity cost matches the plotted points.