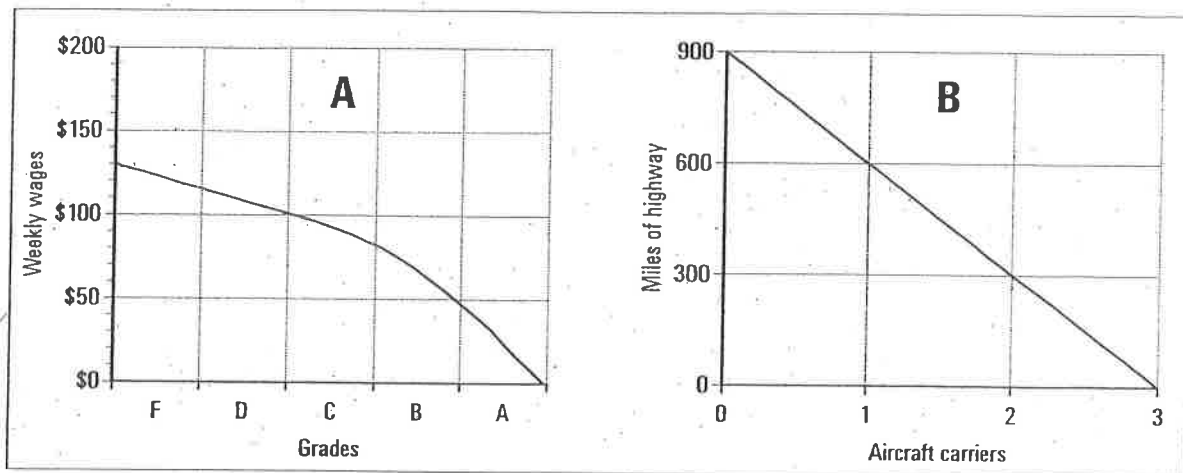


1. WHAT IS ECONOMICS?

Name _____ Date _____

ECONOMIC SKILLS LAB INTERPRETING A PRODUCTION-POSSIBILITIES CURVE

Businesses, nations, and individuals make decisions about how to use their resources. Often these decisions can be understood better by plotting a graph showing the "production possibilities" resulting from different combinations of resources.



1. Maria has four hours of free time each day. She can spend it studying or working at the Wang's Chinese Kitchen for \$6.50 per hour. Curve A illustrates the trade-off between school grades and the wages Maria could earn.

- What are the maximum wages Maria could earn if she works five days a week? _____
- What grades can she expect if she works 10 hours each week? _____
- What advice would you give Maria if she were earning \$50 each week and making Ds? _____

- What advice would you give Maria if she were interested in becoming a pharmacist? A restaurant owner/manager? _____

2. The United States Congress must approve the federal budget. This involves many difficult choices. For example, the Congress can decide to spend money on national defense, health insurance programs, roads and highways, education, and many other worthwhile causes. Curve B illustrates a hypothetical trade-off between spending for defense and highways.

- What is the opportunity cost of one aircraft carrier? _____
- What is the opportunity cost of 300 miles of highway? _____
- What other information would you need to decide on the best combination of defense spending and highway construction? _____

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ECONOMIC SKILLS LAB

MARGINAL REFLECTIONS-INTERPRETING DATA

Like other choices you make, the decision about how long to spend styling your hair depends on your marginal costs and marginal benefits. You don't measure these costs and benefits, of course, nor do you think of them as money amounts. Instead, you just choose based on the personal value of your time.

Suppose you did measure. The table shows personal values for your costs and benefits. The numbers are in money amounts to show these values in terms of other goods and services. For example, the first minute has a marginal cost of 1 cent. This means the minute you give up is worth 1 cent of other goods and services.

Minutes Spent Styling	Marginal Benefit	Marginal Cost
1	15 cents	1 cent
2	14	2
3	13	3
4	12	4
5	11	5
6	10	6
7	9	7
8	8	8
9	7	9
10	6	10
11	5	11
12	4	12
13	3	13
14	2	14
15	1	15

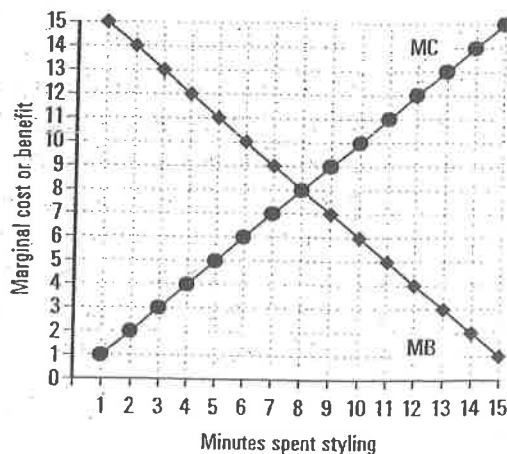
- What is your value of the benefit from spending the first minute styling your hair? _____
What is your opportunity cost of that first minute? _____
- After spending the first minute styling your hair, what are your marginal benefit and marginal cost of an additional (second) minute spent doing so? Marginal Benefit: _____ Marginal Cost: _____
- Given these benefits and costs, would you spend at least two minutes styling your hair? Explain why or why not.

- Based on the table, how many minutes would you choose to spend getting your hair ready?

- Explain why you wouldn't choose to spend more minutes than this styling your hair.

A Mirror and A Graph

The previous set of questions, Marginal Reflections, presents a table of numbers. The numbers show the costs and benefits of spending time styling your hair. It's easier to see the costs and benefits in the table if you put them on a graph. Plot the data for marginal benefits. The first data point dot has been placed on the graph for you. Connect the points and label the line "Marginal Benefits." Then graph and label "Marginal Costs."



- Based on the graph, how many minutes would you spend fixing your hair: _____

1. WHAT IS ECONOMICS?

Name _____ Date _____

7. Use your understanding of marginal thinking to respond to the following statement: (Hint: Is the person thinking that choices of all or none are based on marginal benefits or marginal costs?)

“Eating is a lot more important than entertainment. After all, we have to eat to survive, but we don’t have to listen to music, watch TV, or go to the movies. So we should spend all our money on food and none on entertainment.”

8. Ms. Melrose, the industrial technology teacher, likes to keep the wood shop clean and neat. She also wants the equipment properly maintained. Last year her students spent 20 minutes of each 50-minute class cleaning the shop and maintaining the tools. Ms. Melrose was pleased with the appearance of the shop, but few students were able to finish their projects on time.

a. What is the opportunity cost of having students spend class time cleaning the shop and tools? What is the benefit?

b. Explain why marginal cost and marginal benefit are important if Ms. Melrose wants to make the best choice about the use of the students’ classroom time.

c. How might Ms. Melrose go about making this choice?

9. The citizens of a nation decide to make their natural environment cleaner. They know there are benefits of a cleaner environment, but they also know there are costs. What’s more, the cleaner they make the environment, the higher is the marginal cost and the lower is the marginal benefit of making it still cleaner. Can these people use marginal cost and marginal benefit analysis to decide how clean to make their environment? Explain.
