Name _____ Date _____ Class _____

MATH PRACTICE FOR ECONOMICS ACTIVITY 1

ANALYZING TRADE-OFFS

When making an economic decision, you need to be aware of all the costs involved. Suppose you need to buy a car to get back and forth to work. Your choices are:

A. *A new subcompact costing $13,000,*

B. *A 5-year-old car with 60,000 miles for $5,000, or*

C. *An old junker with 150,000 miles for $800.*

Which one should you choose? Complete the following exercises to find the initial costs and the yearly costs of owning each car for 4 years.

INITIAL COSTS

Some initial expenses of owning a car must be paid in cash. Typical costs for these items are shown in table 1.

1. Complete table below. Use the car costs above and a sales tax rate of 5%.

Initial Expense	Cost for Car A	Cost for Car B	Cost for Car C
a. Title and registration	$100	$100	$100
b. Sales tax (Cost of car times 0.05)	$13,000 × 0.05 = $650		
c. 3 months of insurance	$350	$250	$220
d. Total initial cash costs	$1100		

2. Assume that you have saved $2,000 for the purchase. How much of this money will you be able to put towards the purchase price of each car?

   Car A: _____ Car B: _____ Car C: _____

3. For cars A and B you will need to take out a loan. Find how much you need to borrow for each car.

   a. Loan for car A: _____ b. Loan for car B: _____

YEARLY COSTS

4. Annual costs for a 4-year loan at 10% will be about $30 for each $100 borrowed (30/100 × amount borrowed × 4). How much are the approximate total costs (4-year loan, plus downpayment, plus initial costs) for each car?

   _____

5. Assume that at the end of 4 years Car A is worth $7000, Car B is worth $1000, and Car C is junk, having cost $3,000 in extra repairs. Calculate your total costs by subtracting the value of Cars A and B from your costs and adding $3,000 to C. Which car would you choose? Why?

   _____

Name _____ Date _____ Class _____

MATH PRACTICE FOR ECONOMICS ACTIVITY 2

MAKING A PROFIT

You and two of your friends are planning to run a concession stand at the park from Memorial Day to Labor Day. The three of you will share the work and the profits for the summer. The question is: Will there be any profits?

You are going to sell soda, lemonade, peanuts, and popcorn. You have a good idea of how much you will be able to sell because you have talked to the people who ran the stand the previous summer. You estimate that you can sell at least 200 sodas, 100 cups of lemonade, 50 bags of peanuts, and 300 bags of popcorn every week. You are going to charge 75¢ for soda, 50¢ for lemonade, $1 for peanuts, and 55¢ for popcorn.

Directions: Follow these five steps to calculate your profits.

Step 1: Figure below the amount of money you can expect to take in for one week.

Soda	$.75 × 200	=	(1) _____
Lemonade	$_____ × _____	=	(2) _____
Peanuts	$_____ × _____	=	(3) _____
Popcorn	$_____ × _____	=	(4) _____
	One Week's Revenue		(5) _____

Step 2: Now use the figure for the week to compute your expected revenue for the summer (14 weeks).
(6) _____

Does this figure represent your profits for the summer? (7) _____

Unfortunately, you will not just be taking in money. You will be paying out money for the food you will sell and to rent the stand. Most other businesses have many other expenses, including labor. Since you and your friends will work the stand yourselves, you will not have any labor costs. Your costs are just for food and rent.

You find out that it will cost $560 to rent the stand for the summer. You can buy a week's worth of soda for $90, lemonade for $25, peanuts for $50, and popcorn for $65. What will your costs for the summer be?

Step 3: Do your computations below:

Soda	$_____ × _____	=	(8) _____
Lemonade	$_____ × _____	=	(9) _____
Peanuts	$_____ × _____	=	(10) _____
Popcorn	$_____ × _____	=	(11) _____
Rent		=	(12) _____
	Total Costs		(13) _____

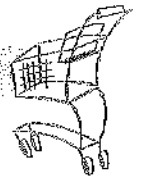
Step 4: Now that you have a reasonable estimate of both your total revenue and your total costs for the summer, use the following equation to project what your profits for the summer will be:

Revenue	−	Costs	=	Profit
(14) _____	−	_____	=	_____

Step 5: Do not forget that the profits have to be split three ways. What will be your share of the summer's profits?
(15) _____

Name _____ Date _____ Class _____

Con$umer Applications



Activity 1

MAKING ECONOMIC DECISIONS

In many ways, economics is the study of making choices. However, making wise choices is not always easy. The five-step decision-making model described below can help you analyze problems and make reasoned choices.

Five-Step Decision-Making Model

1. State the problem.
2. List the alternatives, or choices.
3. List the criteria.
4. Evaluate alternatives, using the criteria.
5. Make a decision.

Directions: *Use the decision-making model above and the following problem to complete the grid and the exercises.*

Problem: Sandy's part-time job earns her only $80 of take-home pay. This week her expenses are especially heavy. She wants to go to a rock concert, which will cost her $30. Her friend Rafael's birthday is also this week, and the present she wants to buy him costs $25. In addition, Sandy's car needs a brake repair, which costs $150. The repair work should be done this week if the car is to be safe to drive. If Sandy pays for the first $75 in repairs, her dad will pay the remaining $75.

Decision-Making Grid

Problem	Alternatives	Criteria for alternatives
1.	1. brake repair 2.	1. safety 2.
2.	1. 2.	1. 2. 3.
3.	1. 2.	1. 2.

1. How should Sandy spend her $80?

   _____

2. What does Sandy gain with this choice? _____ What does she lose? _____

   _____

3. What is Sandy's opportunity cost based on her choices?

   _____