

PROJECT

Applying Chapters 1–3

Running a Business

OBJECTIVE Comparing the expenses and income of a business to determine profitability.

Materials: paper, pencil, graphing calculator or computer (optional)

INVESTIGATION

In Exercises 1–8, use the financial plan below.

My summer window-cleaning business: Financial Plans

1. Expenses:

- Paper towels cost \$.90 for a 60-sheet roll.
- Spray window cleaner costs \$1.98 for a 33-ounce bottle.
- A step ladder costs \$25.00.

2. Income (per window):

Number of windows	1–14	15 or more
Outside only	\$.60	\$.50
Outside and inside	\$1.10	\$1.00

1. You use two paper towels and 0.5 ounce of window cleaner to clean one side of a window. What is the total cost of materials to clean one side of a window?
2. Write an equation to find the cost C of cleaning one side of x windows.
3. Copy and complete the table. You may want to use a spreadsheet.

Number of windows	5	9	15	25
Cost for one side	?	?	?	?
Cost for both sides	?	?	?	?

4. Write an equation for the income I for cleaning both sides of x windows when $x < 15$.
5. How much profit will you make for cleaning both sides of 15 windows?
6. What is your total profit for cleaning the windows of 6 houses (inside and outside) with 12, 17, 13, 9, 14, and 10 windows respectively?
7. How many windows do you have to clean to pay for your step ladder? Explain your reasoning.
8. What would it mean if you found a negative profit?



PRESENT YOUR RESULTS

Write a report about your window cleaning plans.

- Include a discussion of income and expenses.
- Include your answers to Exercises 1–8.
- Explain how the cost of the ladder is a different kind of expense from the cost of paper towels and the window cleaner.

You may want to find out whether this business would work in your neighborhood.

- Survey some of your neighbors to find the price they would be willing to pay to have their windows cleaned.
- Do some research to find out what local businesses pay workers for similar work.
- Find out what the minimum hourly wage is. How many windows would you have to clean each hour to earn that amount?



EXTENSION

Think of a business that you would like to start.

1. If you can, interview someone who has experience with the type of business you are interested in. What advice can that person give you?
2. Do some research to find out what kind of supplies or equipment you would need to get started and the cost of these items.
3. Decide what you could charge customers for this service.
4. Survey some of your friends and neighbors to find the price they would be willing to pay for such a product or service.
5. Write a financial plan for your business.

