Spreadsheet Application Activity
(Use after Lesson 1-1)

Evaluating Functions

You have learned that a function can be evaluated for each value in its domain. A spreadsheet can be used to evaluate certain functions very quickly. Although a spreadsheet can be used to calculate values quickly, it is not just a calculator. You must provide the operators—symbols that indicate what kinds of operations are to occur—in the formula bar of your program. Below is a tale of common operators used with spreadsheets.

*	means multiply
^	means raise to the power of
/	means divide
A1	means the first cell in column A
B2	means the second cell in column B

Study the spreadsheet at the right. The values for x are entered in the cells in column A. In cell B1 of your spreadsheet, enter the formula =3*(A1^3)−7*(A1^2)−2*(A1). When this formula is entered press "Return" or "Enter," and the spreadsheet will perform the operation. Copy this formula into other cells in column B to calculate for other values of x.

	A	B
1	3	=3*(A1^3)−7*(A1^2)−2*(A1)
2	−4	−296

Exercises

1. What algebraic expression does =3*(A1^3)−7*(A1^2)−2*(A1) represent?

2. Use the spreadsheet to evaluate the function in the example for $x = 2$.

3. Use the spreadsheet to find the values of the function for $x = -10$ to $x = 10$. Then, use the graphing capability of the spreadsheet to make a graph of the values. Sketch the graph here.

4. Use a spreadsheet to evaluate each function for the given value.
   a. $b(a) = 3a^7 - 10a^4 + 3a - 11$ for $a = -3$

   b. $b(a) = (a + 3)(a - 10)^2 - a^{\frac{1}{2}}$ for $a = 4$

   c. $b(a) = ((a + 5)(a - 5))^3 \div (a - 5)^2$ for $a = 10$