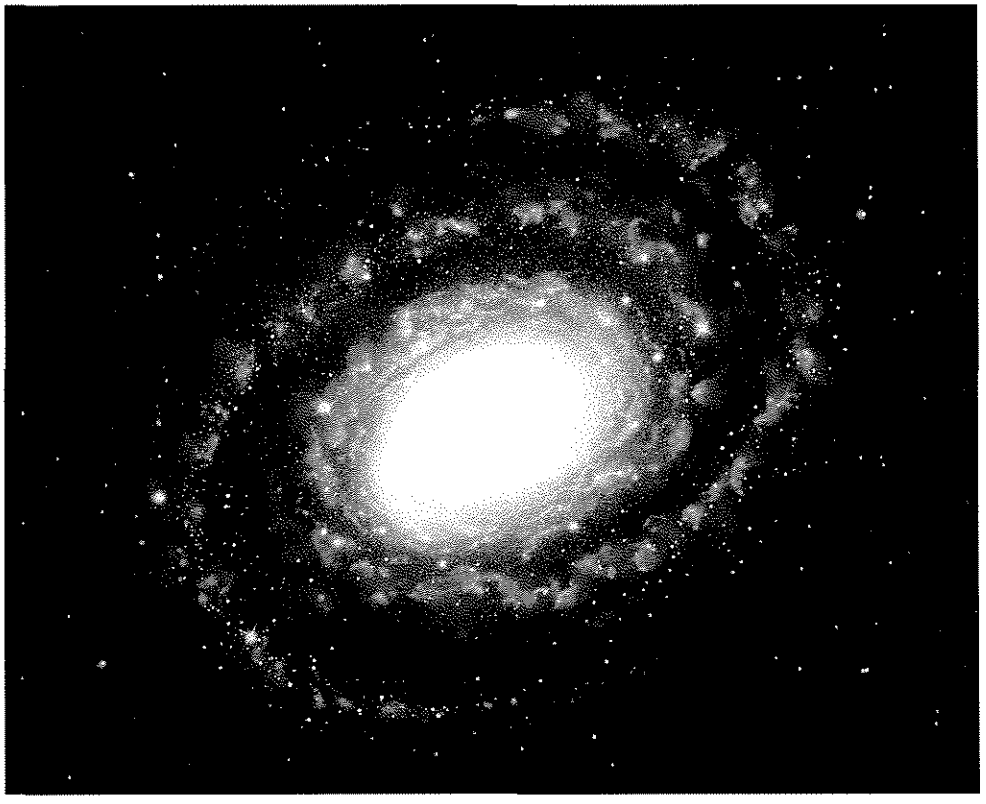
CHAPTER 7



A spiral galaxy, having arms made of gas, dust, and stars

Coming in this chapter:

Exploration The expression $1^3 + 2^3 + 3^3 + 4^3 + 5^3 + \ldots + n^3$ can be modeled by building n cubes out of blocks. Could you rearrange these blocks into a square? If so, what are its dimensions? Experiment with different values of n. Look for a pattern.

PRODUCTS AND POWERS

7.1 Squares and Cubes

7.2 Square Windows

7.3 Squares of Sums

7.4 Differences of Squares

7.A *THINKING/WRITING:* Cube Problems

7.5 Remarkable Identities

7.6 How Many Solutions?

7.7 Equations With Squares

7.8 Power Play

7.B *THINKING/WRITING:* Graphing Inequalities

7.9 Powers and Large Numbers

7.10 Using Scientific Notation

7.11 Using Large Numbers

7.12 As the Crow Flies

7.C *THINKING/WRITING:* One Googol Zeroes

◆ Essential Ideas