

Practice 1-8

Look for a Pattern

Solve by looking for a pattern.

1. Each row in a window display of floppy disk cartons contains two more boxes than the row above. The first row has one box.

a. Complete the table.

Row Number	1	2	3	4	5	6
Boxes in the Row						
Total Boxes in the Display						

b. Describe the pattern in the numbers you wrote.

- c. Find the number of rows in a display containing the given number of boxes.

81 _____ 144 _____ 400 _____

- d. Describe how you can use the number of boxes in the display to calculate the number of rows.

2. A computer multiplied 100 nines. You can use patterns to find the ones digit of the product.

$$\underbrace{9 \times 9 \times 9 \times 9 \times \dots \times 9}_{100 \text{ times}}$$

a. Find the ones digit for the product of:

1 nine _____ 2 nines _____ 3 nines _____ 4 nines _____

b. Describe the pattern. _____

c. What is the ones digit of the computer's product? _____

3. Use the method of Exercise 2 to find the ones digit of the product when 4 is multiplied by itself 100 times. _____