

ACTIVITY 10.16

Diagonal Sums

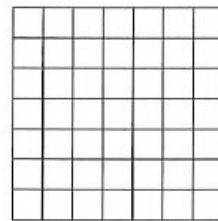
Have students select any four numbers in the hundreds chart that form a square. Add the two numbers on each diagonal as in the example shown here.

Have students explore other diagonal sums on the chart. Expand their search to diagonals of any rectangle. For example, the numbers 15, 19, 75, and 79 form four corners of a rectangle. The sums $15 + 79$ and $19 + 75$ are equal. Challenge students who are able to see if they can figure out why this is so. (See Figure 10.11.)

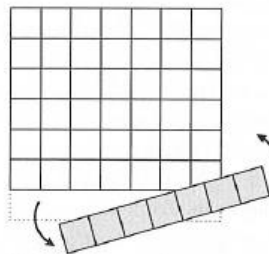
47	48	49	50
57	58	59	60
67	68	69	70
77	78	79	80

FIGURE 10.10 * * * * *

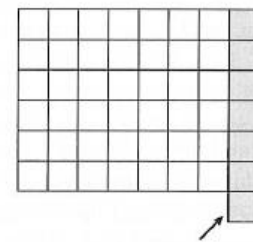
What happens when you begin with a number times itself and then make one factor one greater and the other factor one less?



$$7 \times 7 = 49$$



Cut off one row and put it on the side.



$$6 \times 8 = 48$$

There will always be one unused square.

From Van de Walle, J. A. & Lovin, L.H. (2006). *Teaching Student-Centered Mathematics Grades K – 3*. Toronto: Pearson Education, Inc. (p. 290).