

PYTHAGOREAN INVESTIGATION

(name)

Complete the table. Answer the questions.

- 1. Assemble sets of three squares. The corners should touch with no gaps or overlap.
- 2. What shape is formed inside the squares?
- 3. Calculate the area of all three squares.
- 4. Record this information in your chart.

SET	SMALL AREA	SMALL AREA	SUM	LARGE AREA	TRIANGLE
1	4 x 4 = 16	6 x 6 = 36	5 2	8 x 8 = 64	
2					
3					
4					
5					
6					
7					
8					
9					
1 0					
1 1					
1 2					
1 3					
1 4					

- 5. Which sets of squares will form acute triangles?
- 6. Which sets of squares will form obtuse triangles?
- 7. Which sets of squares will form right triangles?

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Complete the table. Answer the questions.

8. Predict whether these triangles will be acute, obtuse, or right.

SET	SMALL SIDE	SMALL SIDE	SUM	LARGE SIDE	TRIANGLE
15	5	12		13	
16	5	13		14	
17	2	5		6	
18	3	4		5	
19	2	7		9	
20	3	13		15	
21	9	10		14	
22	6	7		10	
23	6	8		10	
24	6	9		10	
25	7	12		13	

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$$6 \times 6 = 36$$

$$2 \times 2 = 4$$

$$3 \times 3 = 9$$

$$4 \times 4 = 16$$

$$7 \times 7 = 49$$

$$5 \times 5 = 25$$

$$8 \times 8 = 64$$

			9x9=81					

A 10x10 grid of squares. In the center of the grid, the text "10x10=100" is written in a bold, black, sans-serif font. The text is positioned such that it spans across the middle four columns and the middle four rows of the grid.