BLACK MATH HISTORY

HIDDEN FIGURES REVEALED

Dr. Thyrsa Svager

Born in 1930 in Wilberforce, Ohio, Thyrsa Frazier Svager achieved what few women of her generation have in the field of education as one of the first African-American women in the United States to earn a Ph.D. in mathematics. Her mother (professor) and father (statistician) instilled the importance of education in Thyrsa from a young age.

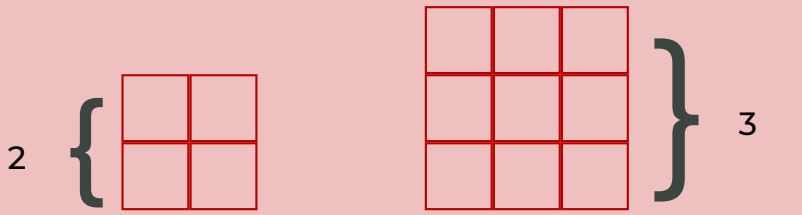
Thyrsa Svager graduated from the Wilberforce University Preparatory Academy at the age of 15, going on to complete her undergraduate studies at Antioch College in Yellow Springs, and earning both her master's degree and doctorate in mathematics at The Ohio State University. She worked as a statistical analyst at Wright-Patterson Air Force Base and instructor at Texas Southern University in Houston. At Central State University, Dr. Svager served as professor, administrator, Dean, Provost, and Interim President.

Some things to think about...

- Dr. Svager was 1 of 4 black students at her college at the time of enrollment. How do you imagine she felt? What would you have done if you had been her classmate?
- Do you think her parents' professions might have influenced her career choice?
- What do you imagine it is like to be a mathematician? What kinds of jobs could you do with a math background?

Her math ideas

On her master's thesis, Dr. Svager was looking for patterns on the numbers that result from adding the areas of two squares. More specifically, the lengths of the sides of these squares had to be whole numbers. For example: the area of a square of side 2 is 4, while the area of a square of side 3 is 9; adding those together gives 13.



Can you find another number, like 13, which is the result of the sum of the areas of two squares?

There are some numbers that cannot result from such a sum. For example, 12. If we look for pairs of numbers that add up to 12 we find:

- 1 + 11 = 12
- 2 + 10 = 12
- 3 + 9 = 12
- 4 + 8 = 12
- 5 + 7 = 12
- 6 + 6 = 12

Out of those numbers, only 1, 4, and 9 are the areas of some squares, but they do not come together in any of the pairs. So, there's no way of writing 12 as the sum of two squares.

Can you think of another example that cannot result from a sum of the areas of two squares?