



Mary Winston Jackson

Mary Winston was born on April 9, 1921, in Hampton, Virginia. She graduated with high honors from Phenix High School located on the Hampton Institute campus. Mary graduated college from the Hampton Institute (now Hampton University) in 1942. At a time when most of Hampton Institute's female students earned degrees in home economics or nursing, Mary earned two bachelor's degrees, one in mathematics and the other in physical science. Mary's parents, Frank Winston and Ella Scott Winston, were also graduates of the Hampton Institute. Mary pledged the Alpha Kappa Alpha Sorority, Incorporated, as an undergraduate at the Hampton Institute.

After graduating from the Hampton Institute, Ms. Winston taught mathematics at a Negro high school in Maryland for one year. In 1943, she became a secretary and bookkeeper for the United Service Organizations (USO). While working at the USO, Mary met and married Levi Jackson, who worked as a painter at the Langley Field in Hampton, Virginia. Langley Field, founded in 1916, was the home of a pioneering military air strip. In 1946 Levi and Mary welcomed their first child, Levi Jr. When Levi was a young boy his mother helped him design a soapbox car, which he raced in the town's annual derby race and won. He was the first colored boy in the history of their town to win the soapbox derby. Mary recognized that "being part of a Black First was a powerful symbol" (Shetterly, 2016, p. 200). The Jacksons had two children, son Levi Jr. and daughter Carolyn. Mary was a pillar in her community, being a devout member of the African Methodist Episcopal Church and a longtime Girl Scout leader. Mary went out of her way to encourage students in her community to consider science and engineering as career choices. She started an after-school science club for students and also tutored students in mathematics and science.



3 . 1 4 1 ⁵ 9 2 6

The first 18 digits of pi (π) are shown. Which digits come next?

In 1951 Mary was hired at the National Advisory Committee for Aeronautics (NACA) as a computer. They referred to the women mathematicians as “computers” at NACA’s Langley Memorial Aeronautical Laboratory located in Hampton, Virginia. Her official title was research mathematician, and she worked under Dorothy Vaughan (also featured in this book). During her years at NACA, Mary worked in the Supersonic Pressure Tunnel and eventually moved to the Compressibility Research Division. She was assigned to work with the flight engineers at NASA who were all men. NACA became NASA in 1958. Mary desired to be an engineer, but first she had to get special permission to take several additional courses at a segregated high school in town. Once approved, Mary joined a special training program and was promoted to aerospace engineer. She became NASA’s first Black female engineer. Mrs. Jackson authored or co-authored 12 technical papers for NACA and NASA. In a 1977 interview, Mary Jackson told *Ebony Magazine*, “I’ve always liked math”, and that is what brought her to NASA (the National Aeronautics and Space Administration).

After 34 years at NASA, Mrs. Jackson reached the highest level of engineer that was possible for her without becoming a supervisor. She decided to change positions in order to challenge discrimination in the workplace and help women of color to advance their careers. She went to NASA headquarters in Washington, DC, to train to become an equal opportunity specialist. In her new position, she advised women and minorities how to get further training so that they could change their titles from mathematicians to engineers to increase their chances of promotion. She worked at NASA until her retirement in 1985.

Mary Winston Jackson died on February 11, 2005.

The story of Mary W. Jackson’s life at NACA/NASA is depicted in the 2016 film *Hidden Figures* about three African American women mathematicians who contributed to the 1960s space race.

5 3 5 8 9 7 9 3 2 3...

Brain Buster

Paola, Sonia, Isabelle, Owen, and Teddy raced to the park. Use the clues below to find which friend arrived at the park in third place.

Sonia did not finish last.

Teddy arrived before Owen.

One person finished before Teddy.

Isabelle arrived after Owen.

Paola came in second to last.

First

Second

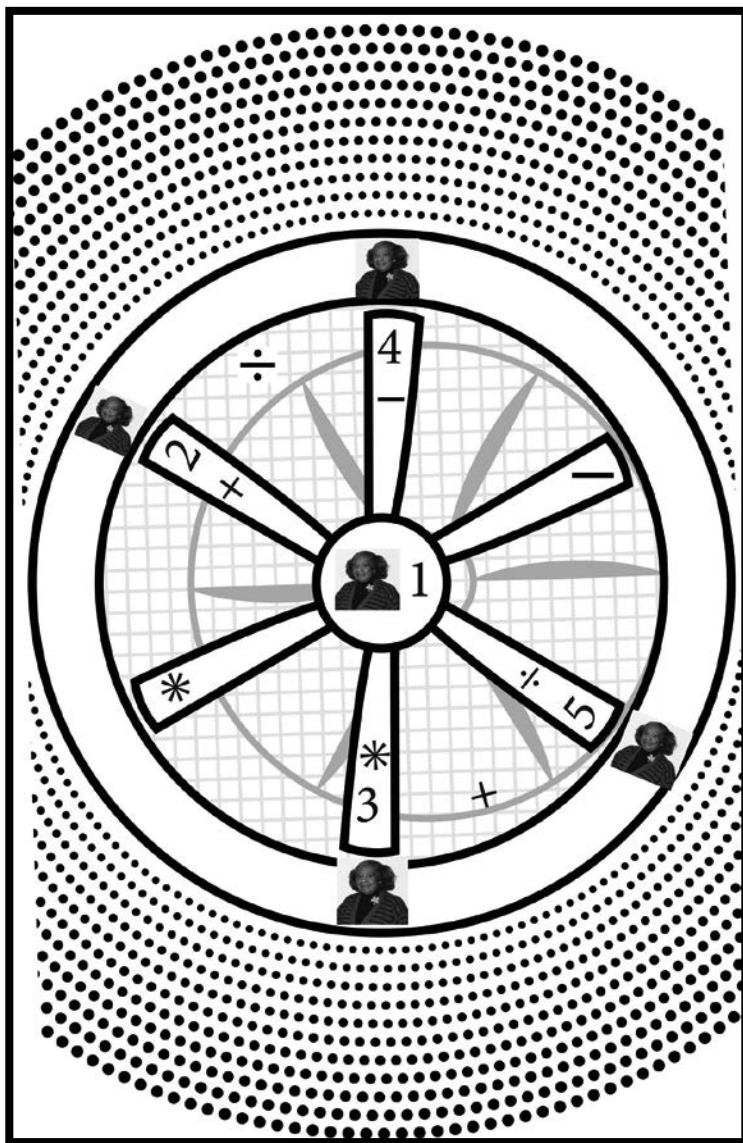
Third

Fourth

Fifth

Wind Tunnel Math

Directions: Each face has a number, and each is separated by an operation: +, −, *, ÷. Connect the faces of Mary Winston Jackson on the wind tunnel to make the largest number possible. You may only use each number once, and you must follow a path. For example, $5 - 4 = 1$. Then $1 - 1 = 0$. Then $0 + 2 = 2$. Finally $2 * 3 = 6$. (The path would be written as $5 - 4 - 1 + 2 * 3$. Note: These are “paths”; therefore, we are NOT using order of operations. There are many possible paths. Have fun!)



The greatest path is _____ = _____