

SENATE RESOLUTION NO. 139

BY SENATOR HARRIS

A RESOLUTION

To commend and congratulate St. Mary's Academy seniors Calcea Johnson and Ne'Kiya Jackson for presenting their theory titled "An Impossible Proof of Pythagoras" at the American Mathematical Society's (AMS) Annual Southeastern Conference.

WHEREAS, the two St. Mary's Academy seniors in New Orleans presented their theory on the Pythagorean Theorem at the AMS Annual Southeastern Conference on March 18, 2023, at the Georgia Institute of Technology in Atlanta, Georgia; and

WHEREAS, Johnson and Jackson's theory has contributed to mathematical advancement on a conundrum that has stumped mathematicians for over 2,000 years; and

WHEREAS, the Pythagorean Theorem states that the sum of the squared sides of a right triangle equals the length of the hypotenuse squared, in algebraic terms, written as: $a^2 + b^2 = c^2$; and

WHEREAS, mathematicians believed that proving the theorem with trigonometry would constitute a failure of logic known as "circular reasoning"; and

WHEREAS, Johnson and Jackson state that their theory proves the Pythagorean Theorem can be proven by using trigonometry "without the circular reasoning" results; and

WHEREAS, the duo's finding may be significant considering that the standard Pythagorean Theorem is used on an everyday basis in professions like architecture, building construction, navigation, spaceflight, computer sciences, and more; and

WHEREAS, it is very important to celebrate and recognize that these two young African-American women, in high school, presented their math research theory at a major conference where most presenters are in college or above; and

WHEREAS, Catherine Roberts, executive director at AMS says, "The next step for Johnson and Jackson is to submit their theory to a peer-review journal, where members of the math community will examine their results to determine if their proof is a correct contribution to the mathematics literature."; and

WHEREAS, while representing African Americans, a severely under represented group in the STEM (science, technology, engineering, and math) fields, Johnson and Jackson

plan to submit their theory to a peer-review journal, graduate this spring, and pursue professions in environmental engineering and biochemistry; and

WHEREAS, when asked about their achievement thus far, the duo say "they are excited just to be a part of the process because there's just nothing like being able to do something that people don't think young people can do" and Johnson adds, "A lot of the time you see this stuff, you don't see kids like us doing it."; and

WHEREAS, we celebrate these early career mathematicians for sharing their work with the national mathematics community.

THEREFORE, BE IT RESOLVED that the Senate of the Legislature of Louisiana does hereby commend and congratulate St. Mary's Academy seniors Calcea Johnson and Ne'Kiya Jackson for presenting their theory titled, "An Impossible Proof of Pythagoras" at the American Mathematical Society's Annual Southeastern Conference, and does hereby record for posterity their accomplishment, and extends best wishes for continued success and happiness in their future endeavors.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to Ms. Calcea Johnson and Ms. Ne'Kiya Jackson.

PRESIDENT OF THE SENATE