

**Do Now:**

1. Who was Sutayta Al-Mahamali?
2. What were the challenges she had to overcome to become a mathematician?
3. What was her contribution in mathematics?
4. How can Sutayta Al-Mahamali’s story be used in the fight of stereotypes against Muslim Women Mathematicians?
5. Describe the connection between these three: House of Wisdom, Al Khawarizmi and Sutayta Al-Mahamali ?



**Big Idea:**

6. Let’s say one day a man in Baghdad brought a problem to Sutayta Al-Mahamali which is as follows: A father left his wealth for his children. The father said that his first child would receive 1000 plus 1/10 of the rest of the wealth and the second child would receive 2000 plus the 1/10 of the rest of the wealth and so one. How much money did he leave and how many children he had?

7. What are the differences between quadratic and cubic equations?

	Equation 1	Equation 2	Equation 3
Equation	$X^3 - 6x^2 + 11x - 6$	$X^3 - 5x^2 + 8x - 4$	$X^3 - 3x^2 + 3x - 1$
Predict Solutions			
Algebra			
Geometry			

**Exit Slip:** Factorized  $Y = X^3 + x^2 + x - 3$  to show that the quadratic part of the equation has no solution by algebra and geometry.