

Impact Statement

Kael Stuart, Grade 7

***The Father of Algebra*, 2025**

Colored Pencil, marker, paper, pen on canvas board, 16 x 13 inches

Andover Middle School, Andover, KS

Teacher: Mrs. Johnna Stoffregen (AEA 2023-24)

Unsung Hero: Muhammad ibn Musa Al-Khwarizmi

My hero is Muhammad ibn Musa Al-Khwarizmi and I chose him as my Unsung Hero because he created some of the hardest math and algebra equations known. Since I love math, I thought this man was great and since he made one of the major parts of math, I chose him for my project.

He was born in AD of 780 and the birthplace is Khwarazm, Persia and died in 850 AD around Baghdad, Iraq. He also had a huge impact on the mathematician's thoughts and feelings on algebra equations. He created linear and quadratic equations. He also influenced medieval mathematicians Fibonacci, Alberd, and Roger Bacon, but through his crafting of algebra, he has essentially influenced every mathematician since. He just didn't do math; he did geography and astronomy. Fun fact, he made the word astronomy. He revived geography, the 2nd-century Greek-language treatise by the Roman polymath Claudius Ptolemy, listing the longitudes and latitudes of cities and localities. He further produced a set of astronomical tables and wrote about calendric works, as well as the astrolabe and the sundial. He surprisingly did supervising of some 70 geographers, he revised and expanded Egyptian polymath Ptolemy's earlier work on geography to cover the coordinates of some 2400 places throughout the world. Particularly around the Mediterranean Sea and cities in Africa and Asia, including lists with latitudes and longitudes, cities, seas, mountains, islands and rivers. Al-Khwarizmi made important contributions to trigonometry, producing accurate sine and cosine tables and the first table of tangents. He also pictured the world map for his portion. In astronomy, he discovered the movement of the sun, moon, and five planets known at the time.

For my drawing, I imagined a trace or sketch of Muhammad ibn Musa Alkhwarizmi and the outside of his cut. Then, glue him on a pretty big piece of white paper behind him. Lastly, I drew many math equations and symbols and label the artwork. Now, the artwork after the thoughts. I did the tracing of Muhammad ibn Musa but used a black paper for the background. Then, I only did three equations and added his numbers and angles. I also added his astronomy work of the five planets that were known at the time. I think this artwork would influence me because it shows that I can keep going with certain studies of math and my future job, as a geologist. I also hope that this can impact on you to show that doing hard work and using your resources can do many

things and have a big impact on modern studies and just you. To the main point, Muhammad ibn Musa Alkhwarizmi had many impacts on math, geography, and astronomy. He did many things that he created that we use today. So, in conclusion, Muhammad Ibn Musa Al-Khwarizmi did a lot of work to change the world's thoughts on certain subjects like math and astronomy. His contributions have influenced every part of our lives even though people might not recognize it.