# Wing Angles in Correlation with Flight Efficiency

Luis Lopez

Practical Applications of Advanced Math

Mrs. Amy Goodrum & Mrs. Anna Hunt

Summer Ventures in Science and Mathematics

University of North Carolina at Charlotte

## Abstract

Since the 20th century airplanes have changed our world. They have helped us get to places more quickly, rescue people, and even fight other people. Airplanes have many parts that help them fly and other parts to help change the direction of the wind. When airplanes are flying there are four forces that help its stability: lift, gravity, drag, and thrust. The main component in flying is the wing. The wings have to be placed at a certain angle depending on what type of plane it is. Does increasing the angle increase the lift? This research experiment revealed that increasing the angle also increases the magnitude of lift. The experiment supported this idea because while practicing the experiment, every time the angle increased one could see a significant amount of lift increase. Also the equation which models wing angles vs. lift, has a positive slope ;therefore, it represents the it will always lift will always increase as the angle increases.