

## **Unit Guide**

### **Moving Students from Conjecture to Proof**

*Kathleen Wilson*

This unit is intended for high school students who have previous experience with analytic geometry. The main objective of the unit is for student to cultivate a habit of mind where they will autonomously seek to prove their conjectures through deductive means rather than accepting a premise based merely on the basis that it holds true for a few isolated examples. Because the notion of proof, and more explicitly what constitutes a valid proof, is somewhat new and nebulous to many students, this unit presents a series of activities aimed moving students toward a deeper understanding and appreciation of the need for conclusive and deductive evidence to support a conclusion. By using algebraic models, geometric examples with the incorporation of dynamic software cases, students will become more engaged in the process of not only stating a conjecture, but also defending their assertions with deductive arguments.