

**Knowledge “Standard”:**

**MST #3.4-Intermediate**-students use mathematical modeling/multiple representation to provide a means of processing, interpreting, communicating and connecting mathematical information and relationships

Use the coordinate plane to explore geometrical ideas

**Course II Curriculum** – distance formula, midpoint, area formulae

**ACADEMIC CHALLENGE**

**High School  
Regents Course II**

**Skill/Disposition “Standard”:**

**C-DOS – Developing interpersonal and citizenship competence** – Teaches others. Helps others to learn

**Question/Issue:**

**How do we determine dimensions of objects plotted on the coordinate plane?**

**Challenge:**

Using classroom and library resources, develop a manual from which the rest of the class will learn the following techniques:

- ÿ Calculating distances between points
- ÿ Calculating mid point of two points
- ÿ Finding area of various common geometric shapes

It is important to remember that a manual is a specific type of book. Always keep in mind the purpose of a manual and why people will be reading it.

**Product Criteria:**

**Book**

Rule criteria

- ß Includes at least one example of each of the three techniques

Form criteria

- ß Cover
- ß Author page
- ß Table of contents
- ß Index

Content criteria

- ß Finding area of various common geometric shapes
- ß Calculating distances between points
- ß Calculating mid point between points
- ß Important vocabulary
- ß

**Evidence of:**

- ß **Knowledge**
- ß **Skill**
- ß **Disposition**

**Targeted Standard/Indicator(s):**

- **Knowledge** – Understands and applies targeted concept(s)  
Look for/Listen for> Student can successfully complete homework problems on the three calculations. Student can pass a quiz on the three calculations
- **Interpersonal/Citizenship Competencies** – Teaches others. Helps others learn  
Look for/Listen for> Student answers other’s questions about something mathematical they don’t understand. Student takes time to explain something new to someone else. Student creates an example to show someone something about mathematics.