Presentations I
September 30 and October 2

• Topics

1. Use Classroom Connection 2.1.4 (page 41) and then prove Theorem 2.15 - Exterior Angle Inequality.

2. Work through Classroom Connection 2.1.5 (page 45) and then prove Exercise 8 from section 2.1 (page 47).

3. Work with Classroom Connection 2.2.2 (page 55) and prove \( S = (n - 2) \cdot 180^\circ \). Discuss the problem and the solution to Figure 2.2.5.

4. Work through Classroom Connection 2.4.3 (page 69) and prove Pick’s Theorem.

5. Use Classroom Connection 2.4.4 (page 69) to prove the formula for the area of a trapezoid. Use this formula to derive the area of a rectangle and parallelogram.

6. Work through Classroom Connection 2.5.1 (page 71) and Classroom Connection 2.5.2 (page 74) proving the final statement of CC 2.5.2.

• Each member of the group needs to speak. The presentations should be at least 8-10 minutes long. You can have more time if you need. Every group should be prepared for Sept. 30. We may be able to do them all in one day.

• A complete presentation will

  1. introduce and explain the problem
  2. give examples and/or non-examples to illustrate
  3. include a rigorous proof
  4. discuss some questions or reactions that may come from the middle school students when this lesson is taught there.

• You MUST use the geogebra computer software during the presentation. Along with that, you are welcome to use any other types of teaching aids. You will have the computer, the document projector, and the white board. I also have access to some manipulatives, so let me know if you want something like that.

• Every member in the group will receive the same grade. Remember that your group will be graded in comparison with the other groups, so do your best. I can schedule times to meet with any group that wants my input on their presentation before they give it.