

MAT.1420 – Mathematics for Elementary Teachers I
Extended Response Problem Solving II

Name _____ Date _____

Your response for this problem will be assessed using the ISAT scoring rubric: Mathematical Knowledge, Strategic Knowledge, and Explanation. Be sure to assess your own work before submitting it in class. Submit your polished solution on this paper (use back if necessary).

A group of students were working with sets of base pieces (other than Base-5 or Base-10). They found the difference and sum of two collections:

$$253 - 166 = 98$$

$$253 + 166 = 409$$

Determine the base the students were using. Describe how you made this determination. Show what a unit (“pip”), long, flat, and big cube would look like in this base. How many units are in each piece?