Turn in your solution to at least two of the problems. **Explain your solution in full sentences. Give detailed reasonings.** Include diagrams and figures if appropriate.

Problem 1. What is the smallest positive integer consisting of only 0's and 1's that is divisible by 225?

Problem 2. What is the volume of a regular tetrahedron whose edge length is 1?

Problem 3. Five pumpkins are weighed in pairs. The 10 resulting weights are, in pounds, 16, 18, 19, 20, 21, 22, 23, 24, 26 and 27. How much does each pumpkin weigh?