Problems 1-2. Time limit 10 minutes.

1. Find a number which is one less than its additive inverse.

2. The lengths of the sides of a triangle are 3.5, 4.2, and x. Let i = the smallest possible integer value of x and let I = the largest possible integer value of x. Find (i , I).

Problems 3-4. 10 minutes.

3. Write a rule using only A, B, C, and the symbols $\cap$ and $\cup$ to represent the shaded portion of the Venn Diagram at right.
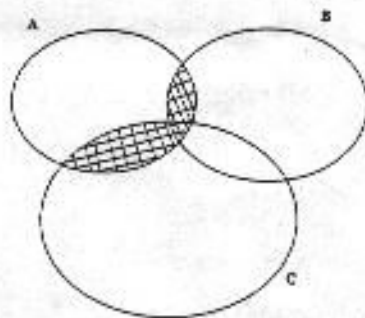
4. A bunch of chairs are arranged in rows, and the number of chairs in each row is the same as the number of rows. Then when the chairs are arranged in rows of four chairs each, the number of rows is three more than it was before. How many chairs are in each arrangement?

Problems 5-6. 11 minutes.

5. Solve for x: $x^2 > 6x + 7$

6. Adjacent sides of hexagon ABCDEF are perpendicular as shown. AB = 7, CD = 4, DE = 3, and AF = 5. Diagonals $\overline{AE}$ and $\overline{CF}$ are drawn and meet at point G. Find (to the nearest tenth) the area of $\triangle$FGE