**Main Problem #9**

Topic: *Composing Decimal Fractions*

Problem: You and your friend Betty are planning a wedding for your friend Olivia and Carlos and the both of you have been tasked to arrange the tables for the reception. There are 10 tables and each table has 10 seats. For this particular weeding, both the bride and the groom do not know how many guests will be arriving, therefore, you and Betty have to plan this event carefully.

Q1. If the bride requires three tenths of the seats reserved for her family and the groom requires $\frac{7}{10}$of the seats reserved for his family, how many seats will be occupied? Justify with a drawing.

Q2. If the bride and groom agree to reserve $\frac{8}{10}$of the seats for their families and the rest for friends, how many seats will be reserved for friends? Justify with a drawing.

Q3. If the bride and groom say there will be approximately 110 guest arriving, will there be enough seats? Justify answer with a drawing and explanation.

\*\*Students should see that there is a limit of 100 seats.

A1. $\frac{3}{10}+\frac{7}{10}=\frac{30}{100}+\frac{70}{100}=\frac{100}{100}=1$. This means that all 100 seats will be occupied.

A2. Let 1 represent all 100 seats. $1-\frac{8}{10}=\frac{100}{100}-\frac{80}{100}=\frac{20}{100}$. 20 seats will be reserved for friends.

A3. There will not be enough seats since there are only 100 seats available and 10 guests from the approximation will have not seat.

[DRAWINGS. A1, A2, A3]

A1. All occupied A2. 20 seats available A3. 110 exceeds the amount of

 available seats