

(10 points) After their delicious dinner, our travelers decide to relax and play a game of Fizzbin. In the game Fizzbin, each player gets six cards, except for the player on the dealer's right, who gets seven, from an ordinary 52 card deck. How many unique Fizzban hands are possible? Be sure to show your work and, to maximize partial credit, discuss your work.

$$\underline{6} \quad \underline{6} \quad \underline{6} \quad \underline{6} \quad \underline{6} \quad \underline{6} \quad \underline{6} \quad \underline{7} = 3 \text{ left over}$$

9. (10 points) The Terans leave somewhat early from their vacation at the Outer Rings as they all have a high school reunion to attend back on Earth. At the reunion they are seated at a round table with 4 other attendees and enjoy catching up with each other. How many different ways can our 8 attendees be seated around the table such that the arrangements are distinct. That is, no two neighbors are the same. Be sure to show your work and, to maximize partial credit, discuss your work.

$$1 \times 3! \times 4! = 144$$