1. Explain the relationship between all categories of rational numbers with irrational numbers. Draw a Venn diagram to show the relationships.

2. Which of the following numbers are irrational? Explain your reasoning.
   a. \( \sqrt{49} \)  
   b. \( \sqrt{7} \)  
   c. 0.753  
   d. 2.4  
   e. \( \pi \)

3. Indicate which are rational and which are irrational. Explain your reasoning.
   a. 2.232232232223…  
   b. 2.3333…  
   c. \( \sqrt{101} \)  
   d. \( \sqrt{225} \)

4. Is it possible to find the exact area and circumference of a circle? Explain your answer.

5. Your house is 28.5 feet tall. Your neighbor’s house is \( \frac{8\frac{2}{3}}{3} \) yards tall. Who has the taller house?

6. Manuel, Rocky, and Cindy are on the same little league baseball team. During the last game Manuel made 3 hits out of 5 times at bat; Rocky had 4 hits at 6 times at bat; Cindy had 5 hits at 6 times at bat. In baseball hitting averages are displayed in thousandths. What is the batting average of each individual?