MT 118, Quiz #11, Fall 2019 Name KEY

Instructions: Show all work. Partial credit can only be given where work is shown. Be sure to answer all parts of each question. You may not use a calculator on this quiz.

1. For each of the fractions $\frac{7}{8}, \frac{4}{5}, \frac{7}{9}$,
   a. determine whether the decimal form is terminating or repeating

   7/8 terminating 0.875 4/5 terminating 0.8 7/9 repeating $0.7\overline{7}$

   b. place in the order smallest to largest.

   $\frac{7}{9}, \frac{4}{5}, \frac{7}{8}$

2. Estimate 14,897 ÷ 750 by rounding to compatible numbers (try to keep your estimate as close as possible to the true value). Explain your reasoning.

   $1500\not{0} \div 75\not{0} = 1500 \div 75 =$

   powers of 10 → $10 \times 150 \div 75 = 10 \times 2 = 20$

   factors → $150 = 75 \times 2$

3. Write the decimal $0.\overline{123}$ as a fraction in lowest terms.

   $\frac{123}{999} = \frac{41}{333}$

4. Simplify $\frac{1.357\times10^{-27}}{2.3\times10^{-3}}$. $= 5.9 \times 10^{-25}$