Decimal Division Practice Quiz

1. For each of the following decide if the quotient is less than 1 or greater than 1
   a. \(9.22 \div 2.8\) \(\approx 3\)
   \[\text{Greater than 1}\]
   b. \(5.6 \div 9.9\) \(\approx 0.56\)
   \[\text{Less than 1}\]

2. Compute each quotient. Describe what patterns you see with the decimal.
   a. \(6.3 \div 9\) = 0.7
   b. \(6.3 \div 0.9\) = 7
   c. \(6.3 \div 0.09\) = 70
   d. \(6.3 \div 0.009\) = 700
   e. \(0.63 \div 9\) = 0.07
   f. \(0.063 \div 9\) = 0.007
   g. \(0.0063 \div 9\) = 0.0007
   h. Patterns?
      \[\text{If you divide the divisor by 10, the quotient gets bigger by 10. If you divide the dividend by 10, the quotient gets smaller by 10.}\]

3. Use the number sentence \(492 \div 4 = 123\) to help you solve the following:
   a. \(492 \div 40\) = 12.3
   b. \(492 \div 400\) = 1.23
   c. \(49.2 \div 4\) = 12.3
   d. \(4.92 \div 4\) = 1.23

4. The student concession stand buys 6.5 pounds of un-popped popcorn for $12.75. What is the price per pound of the popcorn?

\[
\begin{align*}
\text{Price per pound} & \quad \text{Price per pound} \\
\$1.97 & \quad \text{Price per pound} \\
\frac{12.75}{6.5} & \quad \frac{65}{130} \\
1.961 & \quad 0.45 \\
65/12.750 & \quad 65/130 \\
-65 & \quad -65 \\
62.5 & \quad 62.5 \\
-58.5 & \quad -58.5 \\
4.00 & \quad 39.00 \\
\end{align*}
\]
5. A package of 25 mechanical pencils costs $5.75. How much does each pencil cost?

\[
\begin{array}{r}
25)5.75 \\
\underline{50}
\end{array}
\]

\[\frac{75}{75}\]

\[\$0.23\text{ per pencil}\]

6. Which problem has the same solution as \(3.2 \div 14.5\)
   
   a. \(320 \div 145\)
   
   b. \(32 \div 145\)
   
   c. \(14.5 \div 32\)

7. Draw a number line to represent these problems:
   a. \(3.2 \div 0.8\)

   \[
   \begin{array}{cccccc}
   & & & & & \\
   0 & 0.8 & 1.6 & 2.4 & 3.2 & \\
   \end{array}
   \]

   b. \(0.72 \div 0.09\)

   \[
   \begin{array}{cccccccc}
   & & & & & & & \\
   0 & 0.09 & 0.18 & 0.27 & 0.36 & 0.45 & 0.54 & 0.63 & 0.72 & \\
   \end{array}
   \]

8. Turn these decimals into fractions and solve:
   a. \(9.6 \div 0.12\)

   \[
   \frac{960}{100} \div \frac{12}{100} = \frac{80}{1} = 80
   \]

   b. \(20.75 \div 8.3\)

   \[
   \frac{2075}{100} \div \frac{830}{100} = \frac{25}{10} = 2.5
   \]
9. Solve using long division. Round to the nearest hundredth:
   a. \( 0.9 \div 3 \)
      \[
      \begin{array}{c|c}
      3 & 0.9 \\
      \hline
      3 & 0.3 \\
      \end{array}
      \]
      \( = 0.3 \)
   
   b. \( 16 \div 0.8 \)
      \[
      \begin{array}{c|c}
      20 & 16 \\
      \hline
      0.8 & 20 \ \\
      \end{array}
      \]
      \( = 20 \)
   
   c. \( 72.81 \div 0.9 \)
      \[
      \begin{array}{c|c}
      80.9 & 72.81 \\
      \hline
      0.9 & 72 \\
      \hline
      0 & 81 \\
      \hline
      0 & 0 \\
      \end{array}
      \]
      \( = 80.9 \)
   
   d. \( 164 \div 8 \)
      \[
      \begin{array}{c|c}
      20.5 & 164 \\
      \hline
      8 & 164 \\
      \hline
      16 & 0 \\
      \end{array}
      \]
      \( = 20.5 \)