Name _____ Date _____

1. The following equations involve different quantities and use different operations, yet produce the same result. Use a place value chart and words to explain why this is true.

$3.41 \times 10^3 = 3410$ $341{,}000 \div 10^2 = 3410$

2. Use an area model to explain the product of 6.4 and 3. Write the product in standard form, word form, and expanded form.

3. Compare using >, <, or =.

a. 3 tenths + 13 hundredths ☐ 0.13

b. 12 tenths + 5 tenths + 29 hundredths ☐ 12.52

c. 332 hundredths + 5 tenths ☐ 3 + 39 hundredths

d. $2 + 21 \times \frac{1}{10} + 4 \times \frac{1}{100}$ ☐ 2.544

e. $13 + 59 \times \frac{1}{10} + 4 \times \frac{1}{1000}$ ☐ 20.32

f. $0.4 \times 10^2 + 0.006 \times 10^3$ ☐ $0.2 \times 10 + 0.5 \times 10^2$

4. Dr. Sykes mixed 12.343 g of chemical A, 12.209 g of chemical B, and 8.214 g of chemical C to make 5 doses of medicine.

   a. About how much medicine did he make in grams? Estimate the amount of each chemical by rounding to the nearest tenth of a gram before finding the sum. Show all your thinking.

   b. Find the actual amount of medicine mixed by Dr. Sykes. What is the difference between your estimate and the actual amount?

   c. How many grams are in one dose of medicine? Explain your strategy for solving this problem.

   d. Round the weight of one dose to the nearest gram.