

**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.

- In determining an evacuation zone, a scientist must estimate the distance that lava from an erupting volcano will flow. Should she overestimate or underestimate? Explain.

overestimate

to make certain people are outside  
the danger zone

- Find a range estimate for  $1349 \times 45$ .

$$1300 \times 40 = 52,000$$

$$1400 \times 50 = 70,000$$

- Use the Russian peasant algorithm to find the product of  $44 \times 83$ .

$$\begin{array}{r} 44 \times 83 \\ \hline \cancel{22} \times 166 \\ 11 \times 332 \\ 5 \times 664 \\ \hline \cancel{2} \times 1328 \\ 1 \times 2656 \end{array}$$

$$332 + 664 + 2656 = 3652$$

$$\text{check: } 44 \times 83 = 3652$$

- Use a number line, and the repeated subtraction approach to find the dividend and remainder of  $42_{\text{seven}} \div 5_{\text{seven}}$ . =  $6_{\text{seven}}$

