Name _____ Date _____

1. For each written phrase, write a numerical expression, and then evaluate your expression.

a. Forty times the sum of forty-three and fifty-seven

Numerical expression:

$40 \times (43+57)$

Solution:

$40 \times (43+57)$

$= 40 \times 100$

$= 4{,}000$

b. Divide the difference between one thousand three hundred and nine hundred fifty by four

Numerical expression:

$\frac{1300-950}{4}$

Solution:

$\frac{1300-950}{4} = \frac{350}{4} = 87\frac{1}{2}$

c. Seven times the quotient of five and seven

Numerical expression:

$7 \times (\frac{5}{7})$

Solution:

$7 \times (\frac{5}{7}) = \frac{35}{7} = 5$

d. One fourth the difference of four sixths and three twelfths

Numerical expression:

$\frac{1}{4} \times (\frac{4}{6} - \frac{3}{12})$

Solution:

$\frac{1}{4} \times (\frac{4}{6} - \frac{3}{12})$

$= \frac{1}{4} \times (\frac{8}{12} - \frac{3}{12})$

$= \frac{1}{4} \times \frac{5}{12}$

$= \frac{5}{48}$

2. Write at least 2 numerical expressions for each written phrase below. Then, solve.

   a. Three fifths of seven

   $\frac{3}{5} \times 7$ $\quad 3 \times \frac{1}{5} \times 7$

   $= \frac{21}{5}$

   $= 4\frac{1}{5}$

   b. One sixth the product of four and eight

   $\frac{1}{6} \times (4 \times 8)$ $\quad \frac{4 \times 8}{6}$

   $= \frac{1}{6} \times 32$

   $= \frac{32}{6} = 5\frac{2}{6} = 5\frac{1}{3}$

3. Use <, >, or = to make true number sentences without calculating. Explain your thinking.

   a. 4 tenths + 3 tens + 1 thousandth $<$ 30.41

   1 thousandth is smaller than 1 hundredth

   b. $\left(5 \times \frac{1}{10}\right) + \left(7 \times \frac{1}{1000}\right)$ $=$ 0.507

   Expanded notation

   c. 8×7.20 $<$ $8 \times 4.36 + 8 \times 3.59$

   $7.2 < (4.36 + 3.59)$