

University of South Carolina
Math 221: Math for Elementary Educators
Instructor: Austin Mohr
Section 001
Spring 2010

Test 2

1. Draw a picture to solve each problem using the specified method.
 - a. $4 - -3$, set model
 - b. $-8 \div 4$, partition model
 - c. $\frac{5}{7} - \frac{1}{2}$, fraction tiles
 - d. $\frac{7}{3} \div \frac{2}{3}$, fraction tiles

2. Tell, without dividing, whether 3,435 is divisible by each of the following numbers. How do you know?
 - a. 2
 - b. 3
 - c. 4
 - d. 5
 - e. 15

3. For the following questions, use the fact that
$$38,808 = 2^3 \cdot 3^2 \cdot 7^2 \cdot 11$$
$$14,700 = 2^2 \cdot 3 \cdot 5^2 \cdot 7^2.$$
 - a. Find the greatest common divisor of 38,808 and 14,700.
 - b. Find the least common multiple of 38,808 and 14,700.
 - c. Reduce the fraction $\frac{38808}{14700}$.

4. What has to be true about a and b to make each statement true?
 - a. $\frac{a}{3} > \frac{b}{3}$
 - b. $\frac{7}{a} > \frac{7}{b}$
 - c. $\frac{a}{3} = \frac{b}{6}$

5. Explain with words and/or pictures why each statement is true. (Simply saying that they are both the same number is not an explanation.)
 - a. adding a negative is the same as subtracting a positive
 - b. negative times negative is positive