

### Review 3:

This review is meant as a general overview of SOME of the topics covered in class up to date. The test questions will not only cover this material but will also cover sections 3.1, 4.4, 5.1-5.4 and 6.1-6.4. You should know all definitions and techniques outlined in the text, and be comfortable with the properties and examples throughout the above sections as well as know how to solve the exercises and homework problems. Below I provide some sample problems that cover material from class. I am in no way promising any of these problems will be on the test. They are solely for practice. Other good sample problems can be found in your homework assignments, lecture notes, and class handouts, as well as the before mentioned places. Be sure you are comfortable with all material presented during the student presentations. You are responsible for all of it; including clock arithmetic.

1. Represent  $\frac{8}{3} - \frac{4}{5}$  and  $\frac{7}{9} + \frac{2}{12}$  in  $\mathbb{Q}$  using each of your four models for addition and subtraction.
2. Write the fraction  $\frac{252}{-1320}$  in simplest form.
3. Complete the following calculations in base 14:
  - (a)  $7 +_{14} 9$
  - (b)  $5 -_{14} 10$
  - (c)  $6 \times_{14} 7$
  - (d)  $6 \div_{14} 2$
  - (e)  $18 \div_{14} 7$
  - (f)  $13 \div_{14} 5$
4. Use color counters to give a representation of  $7 + (-1)$  and  $7 - 1$ .
5. Find equivalent fractions with the least common denominator for the rational numbers:  $\frac{7}{6}$  and  $\frac{19}{28}$ .
6. Develop word problems and solve them using at least two different conceptual methods for a multiplication problem and also a division problem.
7. Order the rational numbers from least to greatest using the  $<$  symbol:

$$\frac{-4}{-5}, \frac{7}{9}, \frac{-9}{4}, \frac{21}{-22}$$