

Study your notes, reading, handouts, activities, Quiz-HW, and practice HW with reference to this list.

**Fractions:**

1. Add, subtract, multiply, divide fractions entirely by hand if asked, showing all steps.
2. Solve word problems requiring fraction or mixed number arithmetic. (See text HW.)
3. Reduce answers to lowest terms/simplest form when asked, showing steps.
4. Fill in boxes to make a true equality, as in 6-2B Problem #4.
5. Explain correct/incorrect interpretations, as in 6-2 and 6-3 Connections problems.
6. Tell which operations require common denominators, and why.
7. Explain how we multiply fractions, and why that makes sense/what it represents.
8. Find the multiplicative inverse/reciprocal of a number, as in 6-3 text HW.
9. Explain clearly HOW we divide fractions and also WHY that works. (See notes.)
10. Draw, label, explain diagrams to add, multiply, divide fractions, including with improper fractions, mixed numbers (division), and “left-overs” (division).
11. Explain how all aspects of the answer are seen/interpreted in such diagrams.
12. Remember that the denominator is the number of (same-size) pieces in ONE whole.
13. Show work converting between mixed numbers and improper fractions, with and without shortcut.
14. Add, subtract two or more mixed numbers IN THAT NOTATION, showing correct regrouping.
15. Answer multiply/divide estimation or number sense questions like 6-3A and 6-3B #9, 10.

**Ratio and Proportion:**

1. Convert between ratios given verbally or with notation; use “for/out of every” types of phrases, but be prepared for fractions or “times” words also.
2. Interpret/write ratios in lowest terms. Recognize part-to-part vs. part-to-whole.
3. Distinguish representative sets vs. unit-rate/scaling vs. proportional equations.
4. Solve word problems using each of these when required, and prepare to explain.
5. For representative sets, drawing and explaining a picture is usually most successful.
6. For scaling or unit-rate, be as thorough as possible. Don’t skip info.
7. You need NOT distinguish between additive vs. multiplicative scaling, nor a mix of the two - they ALL count as scaling. Unit-rate thinking also counts as scaling.
8. When you create proportional equations, charts are allowed but not required.
9. Be sure to fully answer questions, including correct measurements when appropriate.

**Decimal Basics:** (SOME material from Thursday, Mar. 22, will be on the exam.)

1. Explain why  $10^0$  equals 1,  $10^{-1} = \frac{1}{10}$ , etc. (Discussing “number of 0s” is NOT ACCEPTABLE.)
2. Round decimal numbers - use a trailing zero when you MUST.
3. Find one or more numbers that round TO a desired result.
4. Find some or all decimals satisfying given clues, including rounding or exponent clues.
5. Word form and expanded forms will NOT be on Exam #2; they will appear on Exam #3.

You will need an approved calculator for this exam.