

Prepare for the exam by carefully studying this list with reference to your notes, in-class materials, reading, and homework assignments. Strive to master the concepts, explanations, and computational techniques for use in general.

Decimal Basics:

1. Convert: standard notation, word form, expanded form with/without exponents.
2. Round decimal numbers - use a trailing zero when you MUST.
3. Find all decimals satisfying given clues, including rounding or exponent clues.
4. Add, subtract, multiply, and divide decimal numbers by hand.
5. Know what we do with the decimal points for each arithmetic operation, and why.
6. Explain how to find the smallest place value in a given product, **without counting**.
7. Order a given collection of decimals, including non-terminating (bar or ellipsis).
8. Know, state what the concept of denseness means for decimal numbers.
9. Demonstrate denseness, including rational or irrational numbers between others.

Decimal Appearances:

1. List the three appearances possible for decimal numbers. Give examples of each.
2. Use and understand bar notation to represent repeating decimals.
3. Use and understand ellipsis notation for non-terminating decimals.
4. Convert between bar notation and ellipses to represent repeating decimals.
5. Know which decimal appearances can and cannot be converted to fractions (are/are not rational).
6. Convert appropriate decimals to fractions, showing work. Create and recognize irrational numbers.
7. Convert fractions to decimals; round, use bar, or use ellipsis as allowed.
8. Be careful about trusting your calculator display.

Percents:

1. Use correct notation to convert among decimals and percents.
2. Round to the nearest tenth, hundredth, etc. of a percent when asked.
3. Solve percent word problems that don't have any "real life" context.

Statistics:

1. Read and interpret graphical information, as in HW.
2. Tell what each type of graph is best for; make the best choice for a given setting.
3. Create, label all the types of graphs listed on the Summary except scatter plots.
4. Be prepared for graphs that require percents, as in textbook HW.
5. Create a box plot and/or a 5-Number Summary for a list of scores.
6. Find the mean, median, and mode(s) of a list of scores.
7. Create data that has specified mean, median, mode, or standard deviation behavior, as in HW.
8. Find the range of a given set of data; use given range to find missing data, as in HW.
9. Find the mean or total when individual scores are not given (see HW).
10. Given a mean, find the new mean when a few new scores are added, deleted.
11. Find a mean when given the means for some groups of data, as in the cheerleader problem.

Bring a non-cell phone calculator (no text-based memory) for the exam.