Math 247 test 1 review topics

Integers:

- Show how to add and subtract integers on a number line
- Show how to add, subtract and multiply integers with integer chips
- Explain what the steps are and what they are doing when you add, subtract and multiply with integer chips

Fractions:

- Find fractional parts of wholes, and the size of a whole given a fraction.
    - I might give you a shape and say this is the whole (it might be a fraction circle piece or it might be a shape like a rectangle) and ask you what does 1/3 look like, and you would find it in your fraction circles or draw it
    - I might give you a shape (fraction circle piece or other), and tell you that it shows 1/3 and ask you to show what 1 whole is
    - I might give you a shape (rectangle or fraction circle) and tell you that it shows 4/5, and ask you to explain the process of showing a different fraction, like 4/3 (similar to the on computer problems from Fargo and Denny)
- Explain the process of getting a fraction from a whole: I will give a rectangle, circle or length to be the unit whole, and ask you to show how to get a fraction such as 7/6. (See describing fractions with unit fractions
- Figure out which of a pair of fractions is larger and explain why using one of the pre-equivalence strategies (same denominator, same numerator, transitive or residual)
- Estimate a sum or difference of fractions on a number line, and explain your estimate using unit fraction and fraction comparison strategies.
- Equivalent fractions:
    - Starting with a fraction such as 2/3, explain how to get that it is equivalent to a fraction with more parts such as 8/12 by splitting. Explain how splitting results in the usual multiplication process.
    - Starting with a fraction such as 8/12, explain how to get a simplified fraction by grouping. Explain how grouping produces the usual division process.
- Fractions greater than 1:
    - Given a fraction greater than 1, such as 17/7, explain how to get the equivalent mixed number by making wholes
    - Given a mixed number such as 2 3/8, explain how to get the equivalent fraction greater than 1 by splitting each whole.