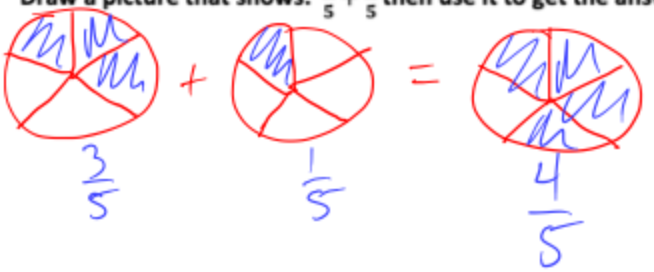
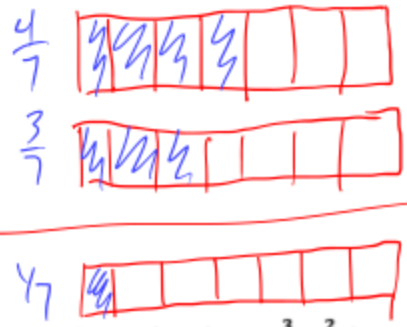
Math 9 Section 3.3 – Adding/Subtracting Rational Numbers

Homework: Section 3.3 on Pg. 105; #1-5half, 8-10half, 11-18

Draw a picture that shows: $\frac{3}{5}+\frac{1}{5}$ then use it to get the answer



Draw a picture that shows: $\frac{4}{7}-\frac{3}{7}$ then use it to get the answer



Draw a picture that shows: $\frac{3}{8}+\frac{2}{5}$ then explain why you can't use it to get the answer

Pieces are different sizes

(Denominators are different)

When adding/subtracting two fractions, they must have the same Denominator then you just add or subtract the numerator to get the answer.

Denominator Stays the Same!

Examples: *(Give your answers as mixed **AND** improper fractions)*

$-\frac{17}{10} - \frac{9}{10} = \frac{-17-9}{10} = \frac{-26}{10} \overset{\div 2}{=} \frac{-13}{5}$

Mixed:

$5 \overline{)13}$ -10 remainder 3 → $-2\frac{3}{5}$

$5\frac{1}{9} - 2\frac{4}{9} = \frac{9 \cdot 5 + 1}{9} - \frac{9 \cdot 2 + 4}{9}$

$= \frac{46}{9} - \frac{22}{9} = \frac{24}{9} \div 3 = \frac{8}{3}$

Mixed:

$3 \overline{)8}$ -6 remainder 2 → $2\frac{2}{3}$

$\frac{2}{3} + \frac{5}{8} = \frac{2 \cdot 8}{3 \cdot 8} + \frac{5 \cdot 3}{8 \cdot 3}$

$= \frac{16}{24} + \frac{15}{24}$

$= \frac{31}{24}$ Try numbers

$24 \overline{)31}$ -24 remainder 7 → $1\frac{7}{24}$

$1\frac{2}{5} - 3\frac{1}{15} =$

$1\frac{2 \cdot 3}{5 \cdot 3} - 3\frac{1}{15}$

$1\frac{6}{15} - 3\frac{1}{15}$

$\frac{1 \cdot 15 + 6}{15} - \frac{3 \cdot 15 + 1}{15}$

$= \frac{21}{15} - \frac{46}{15} = -\frac{25}{15} \overset{\div 5}{=} -\frac{5}{3}$

$3 \overline{)5}$ -3 remainder 2 → $-1\frac{2}{3}$