Math 9 Section 3.3 – Adding/Subtracting Rational Numbers

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

$\frac{3}{5}$ + $\frac{1}{5}$ = $\frac{4}{5}$

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

$\frac{4}{7}$

$-\frac{3}{7}$

$\frac{1}{7}$

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

$\frac{3}{8}$ + $\frac{2}{5}$
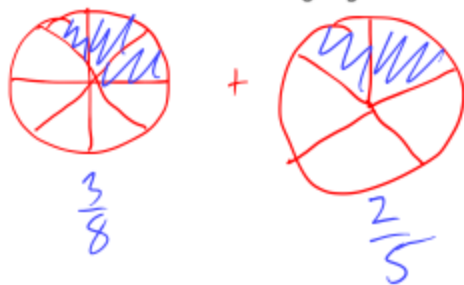
Pieces are different sizes (different denominators)

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)*

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

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

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

mixed:

$5\overline{\smash{)}13}$
$\underline{-10}$
remainder (3)

$\boxed{-2\frac{3}{5}}$

$3\overline{\smash{)}8}$
(6)
(2)
$\rightarrow \boxed{2\frac{2}{3}}$

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

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

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

$= \boxed{\frac{31}{24}} \rightarrow 24\overline{\smash{)}31} \quad \boxed{1\frac{7}{24}}$
$\underline{-24}$
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$1\frac{2}{5} - 3\frac{1}{15} =$

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

$\frac{7\cdot 3}{5\cdot 3} - \frac{46}{15}$

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

$\rightarrow 3\overline{\smash{)}5} \quad \boxed{-1\frac{2}{3}}$
$\underline{-3}$
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