

2.3b Subtracting Rational #'s

Subtracting Fractions

1. Find a common denominator
2. Multiply denominator and numerator by the same #.
3. Borrow from integer, if needed
4. Subtract numerators (keep denominator)
5. Simplify

Ex. 1 $\frac{5}{7} - \frac{1}{2}$

$$\begin{array}{r} \frac{5}{7} \cdot \frac{2}{2} = \frac{10}{14} \\ - \frac{1}{2} \cdot \frac{7}{7} = -\frac{7}{14} \\ \hline \boxed{\frac{3}{14}} \end{array}$$

Ex. 2 $\frac{6}{15} + (+\frac{3}{5})$

$$\begin{array}{r} \frac{6}{15} \rightarrow \frac{6}{15} \\ + \frac{3}{5} \cdot \frac{3}{3} = +\frac{9}{15} \\ \hline \boxed{\frac{15}{15}} \\ \boxed{1} \end{array}$$

Ex. 3 $-4\frac{6}{14} + (+1\frac{2}{7})$

$$\begin{array}{r} 4\frac{6}{14} \rightarrow 4\frac{6}{14} \\ - 1\frac{2}{7} \cdot \frac{2}{2} = -1\frac{4}{14} \\ \hline -3\frac{2}{14} \\ \boxed{-3\frac{1}{7}} \end{array}$$

Ex. 4 $-5\frac{2}{3} + 2\frac{3}{4}$

$$\begin{array}{r} 5\frac{2}{3} \cdot \frac{4}{4} = 5\frac{8}{12} + \frac{12}{12} \\ - 2\frac{3}{4} \cdot \frac{3}{3} = -2\frac{9}{12} \\ \hline \boxed{-2\frac{11}{12}} \end{array}$$

Ex. 5 $-\frac{6}{17} + \frac{3}{5}$

~~$$\begin{array}{r} \frac{6}{17} \cdot \frac{5}{5} = \frac{30}{85} \\ - \frac{3}{5} \cdot \frac{17}{17} = -\frac{51}{85} \\ \hline \frac{30}{85} \end{array}$$~~

$$\begin{array}{r} \frac{3}{5} \cdot \frac{17}{17} = \frac{51}{85} \\ - \frac{6}{17} \cdot \frac{5}{5} = -\frac{30}{85} \\ \hline \boxed{\frac{21}{85}} \end{array}$$

HW: p. 62 #3-8, 12-16 omit 14