Reasoning and Problem Solving
Add and Subtract Fractions

Developing

1a. Mel is incorrect as the missing numerator is 2.

2a. Various answers where the numerator totals 5, for example: $\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$.

3a. $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$ or $\frac{4}{8} + \frac{3}{8} = \frac{7}{8}$

Expected

4a. Sara is incorrect as the missing numerator is 10.

5a. Various answers where the numerators give an answer of 7, for example: $\frac{9}{5} - \frac{2}{5} = 1\frac{2}{5}$.

6a. $\frac{8}{9} + \frac{3}{9} = 1\frac{2}{9}$

Greater Depth

7a. Asha is incorrect. The missing numerator is 3 because $\frac{18}{12} - \frac{3}{12} = 1\frac{3}{12}$ and $1\frac{3}{12} = 1\frac{1}{4}$.

8a. Various answers where the numerators total 12, for example: $\frac{5}{9} + \frac{7}{9} = 1\frac{1}{3}$.

9a. $\frac{12}{15} + \frac{8}{15} = 1\frac{1}{3}$

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1b. Ian is correct because $\frac{2}{8} + \frac{6}{8} = \frac{8}{8}$.

2b. Various answers where the numerators give an answer of 2. for example: $\frac{4}{9} - \frac{2}{9} = \frac{2}{9}$.

3b. $\frac{5}{6} - \frac{1}{6} = \frac{4}{6}$ or $\frac{5}{6} - \frac{4}{6} = \frac{1}{6}$

Expected

4b. Ted is incorrect as the missing numerator is 5.

5b. Various answers where the numerators total 11, for example: $\frac{4}{6} + \frac{7}{6} = 1\frac{5}{6}$.

6b. $1\frac{3}{6} - \frac{4}{6} = \frac{5}{6}$ or $1\frac{3}{6} - \frac{5}{6} = \frac{4}{6}$

Greater Depth

7b. Ivor is correct. The numerators must total 12 because $\frac{12}{8} = 1\frac{1}{2}$.

8b. Various answers where the numerators total 18, for example: $\frac{10}{12} + \frac{8}{12} = 1\frac{1}{2}$.

9b. $1\frac{3}{8} - \frac{9}{8} = \frac{1}{4}$