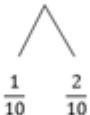Name _____   Date _____

1. Show one way to solve each problem. Express sums and differences as a mixed number when possible. Use number bonds when it helps you. Part (a) is partially completed.
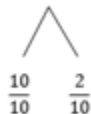
a. $\frac{1}{3} + \frac{2}{3} + \frac{1}{3}$

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

$= \underline{1\frac{1}{3}}$

b. $\frac{5}{8} + \frac{5}{8} + \frac{3}{8} =$

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

$= \frac{5}{8} + 1$

$= 1\frac{5}{8}$

c. $\frac{4}{6} + \frac{6}{6} + \frac{1}{6} =$

$= \frac{5}{6} + \frac{6}{6}$

$= \frac{5}{6} + 1$

$= 1\frac{5}{6}$

d. $1\frac{2}{12} - \frac{2}{12} - \frac{1}{12} =$

$= 1 - \frac{1}{12}$

$= \frac{12}{12} - \frac{1}{12}$

$= \frac{11}{12}$

e. $\frac{5}{7} + \frac{1}{7} + \frac{4}{7} =$

$= \frac{6}{7} + \frac{4}{7}$

$= \frac{10}{7}$

$= \frac{7}{7} + \frac{3}{7}$

$= 1\frac{3}{7}$

f. $\frac{4}{10} + \frac{7}{10} + \frac{9}{10} =$

$= \frac{11}{10} + \frac{9}{10}$

$= \frac{20}{10}$

$= \frac{10}{10} + \frac{10}{10}$

$= 2$

g. $1 - \frac{3}{10} - \frac{1}{10} =$

$= 1 - \frac{4}{10}$

$= \frac{10}{10} - \frac{4}{10}$

$= \frac{6}{10}$

h. $1\frac{3}{5} - \frac{4}{5} - \frac{1}{5}$

$\frac{5}{5} \quad \frac{3}{5}$

$= \frac{8}{5} - \frac{4}{5} - \frac{1}{5}$

$= \frac{4}{5} - \frac{1}{5}$

$= \frac{3}{5}$

i. $\frac{10}{15} + \frac{7}{15} + \frac{12}{15} + \frac{1}{15} =$

$= \frac{17}{15} + \frac{13}{15}$

$= \frac{30}{15}$

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

$= 1 + 1 = 2$

Lesson 18:   Add and subtract more than two fractions.

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2. Bonnie used two different strategies to solve $\frac{5}{10} + \frac{4}{10} + \frac{3}{10}$.

Bonnie's First Strategy

$$\frac{5}{10} + \frac{4}{10} + \frac{3}{10} = \frac{9}{10} + \frac{3}{10} = \frac{10}{10} + \frac{2}{10} = 1\frac{2}{10}$$

$\frac{1}{10} \quad \frac{2}{10}$

Bonnie's Second Strategy

$$\frac{5}{10} + \frac{4}{10} + \frac{3}{10} = \frac{12}{10} = 1 + \frac{2}{10} = 1\frac{2}{10}$$

$\frac{10}{10} \quad \frac{2}{10}$

Which strategy do you like best? Why?

Answers will vary

3. You gave one solution for each part of Problem 1. Now, for each problem indicated below, give a different solution method.

1(b) $\frac{5}{8} + \frac{5}{8} + \frac{3}{8} =$

$= \frac{10}{8} + \frac{3}{8}$

$= \frac{13}{8}$

$= \frac{8}{8} + \frac{5}{8} = 1\frac{5}{8}$

1(e) $\frac{5}{7} + \frac{1}{7} + \frac{4}{7} =$

$\frac{2}{7} \quad \frac{2}{7}$

$= 1 + \frac{1}{7} + \frac{2}{7}$

$= 1\frac{3}{7}$

1(h) $1\frac{3}{5} - \frac{4}{5} - \frac{1}{5} =$

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

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

$= \frac{3}{5}$

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Lesson 18:   Add and subtract more than two fractions.