



1) a) $\frac{1}{2} + \frac{3}{4} + \frac{3}{8} = \frac{13}{8} = 1\frac{5}{8}$

b) $\frac{11}{8} = 1\frac{3}{8}$

c) $\frac{21}{12} = 1\frac{9}{12}$

d) $\frac{23}{16} = 1\frac{7}{16}$

2)

$\frac{2}{3} + \frac{5}{12} + \frac{5}{6}$	$1\frac{8}{12}$
$\frac{1}{2} + \frac{5}{12} + \frac{3}{4}$	$1\frac{11}{12}$
$\frac{1}{12} + \frac{1}{3} + \frac{3}{4}$	$1\frac{2}{12}$

Diagram showing connections between boxes:

- Box 1 ($\frac{2}{3} + \frac{5}{12} + \frac{5}{6}$) connects to Box 2 ($1\frac{11}{12}$).
- Box 2 ($\frac{1}{2} + \frac{5}{12} + \frac{3}{4}$) connects to Box 1 ($1\frac{8}{12}$).
- Box 3 ($\frac{1}{12} + \frac{1}{3} + \frac{3}{4}$) connects to Box 3 ($1\frac{2}{12}$).



1) a) True

b) False $\frac{1}{2} + \frac{3}{7} + \frac{4}{14} = 1\frac{3}{14}$

c) False $\frac{1}{3} + \frac{2}{5} + \frac{7}{15} = 1\frac{3}{5}$

d) True

*In calculation b, the numerators and denominators have been added as separate calculations.
In calculation c, the improper fraction has not been converted correctly.*

2) $\frac{1}{2} + \frac{2}{3} + \frac{4}{6} = 1\frac{5}{6}$

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



1) Possible answers include the following:

$$\frac{1}{2} + \frac{5}{6} + \frac{4}{12} = 1\frac{8}{12}$$

$$\frac{1}{4} + \frac{4}{6} + \frac{4}{12} = 1\frac{3}{12}$$

$$\frac{1}{3} + \frac{5}{6} + \frac{4}{12} = 1\frac{6}{12}$$

2) There are 17 solutions. Look for systematic recordings from children.

$$\frac{1}{2} + \frac{1}{4} + \frac{3}{8} = 1\frac{1}{8}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{4}{8} = 1\frac{2}{8}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{5}{8} = 1\frac{3}{8}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{6}{8} = 1\frac{4}{8}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{7}{8} = 1\frac{5}{8}$$

$$\frac{1}{2} + \frac{2}{4} + \frac{1}{8} = 1\frac{1}{8}$$

$$\frac{1}{2} + \frac{2}{4} + \frac{2}{8} = 1\frac{2}{8}$$

$$\frac{1}{2} + \frac{2}{4} + \frac{3}{8} = 1\frac{3}{8}$$

$$\frac{1}{2} + \frac{2}{4} + \frac{4}{8} = 1\frac{4}{8}$$

$$\frac{1}{2} + \frac{2}{4} + \frac{5}{8} = 1\frac{5}{8}$$

$$\frac{1}{2} + \frac{2}{4} + \frac{6}{8} = 1\frac{6}{8}$$

$$\frac{1}{2} + \frac{2}{4} + \frac{7}{8} = 1\frac{7}{8}$$

$$\frac{1}{2} + \frac{3}{4} + \frac{1}{8} = 1\frac{3}{8}$$

$$\frac{1}{2} + \frac{3}{4} + \frac{2}{8} = 1\frac{4}{8}$$

$$\frac{1}{2} + \frac{3}{4} + \frac{3}{8} = 1\frac{5}{8}$$

$$\frac{1}{2} + \frac{3}{4} + \frac{4}{8} = 1\frac{6}{8}$$

$$\frac{1}{2} + \frac{3}{4} + \frac{5}{8} = 1\frac{7}{8}$$