

M3-L9 - Adding Fractions w/ Unlike Denominators

$$\frac{1}{2} + \frac{1}{5}$$

Least Common Multiple (LCM)

2: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20

5: 5, 10, 15, 20

$$\left(\frac{1 \times 5}{2 \times 5} \right) + \left(\frac{1 \times 2}{5 \times 2} \right) \quad \left(\frac{1 \times 10}{2 \times 10} \right) + \left(\frac{1 \times 4}{5 \times 4} \right)$$
$$\frac{5}{10} + \frac{2}{10} \quad \frac{10}{20} + \frac{4}{20}$$
$$\frac{7}{10} \quad \frac{14}{20} = \frac{7}{10}$$

$$\frac{1}{2} + \frac{2}{3}$$

2: 2, 4, 6

3: 3, 6, 9

$$\left(\frac{1 \times 3}{2 \times 3} \right) + \left(\frac{2 \times 2}{3 \times 2} \right)$$

$$\frac{3}{6} + \frac{4}{6} = \frac{7}{6} = \left(\frac{6}{6} + \frac{1}{6} \right) = 1 \frac{1}{6}$$

$$\frac{5}{9} + \frac{5}{6}$$

6: 6, 12, 18

9: 9, 18, 27, 36

$$\left(\frac{5 \times 2}{9 \times 2} \right) + \left(\frac{5 \times 3}{6 \times 3} \right)$$

$$\frac{10}{18} + \frac{15}{18} = \frac{25}{18} = \left(\frac{18}{18} + \frac{7}{18} \right) = 1 \frac{7}{18}$$

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

$$\left(\frac{2 \times 4}{3 \times 4}\right) + \left(\frac{1 \times 3}{4 \times 3}\right) + \left(\frac{1 \times 6}{2 \times 6}\right)$$
$$\frac{8}{12} + \frac{3}{12} + \frac{6}{12}$$

$$\frac{17}{12} = \left(\frac{12}{12} + \frac{5}{12}\right) = 1\frac{5}{12}$$

$$1\frac{3}{4} + \frac{7}{8}$$

$$1 + \left(\frac{3 \times 2}{4 \times 2}\right) + \left(\frac{7 \times 1}{8 \times 1}\right)$$

$$1 + \frac{6}{8} + \frac{7}{8} =$$

$$1 + \frac{13}{8} = \left(\frac{8}{8} + \frac{5}{8}\right)$$

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