Adding or subtracting unlike fractions

 $\frac{1}{2}$

Before we can add or subtract unlike fraction we need to find their lowest common denominator (LCM). When adding $\frac{1}{4}$ to $\frac{1}{2}$ the lowest common denominator is 4 (quarters).

For example: $\frac{1}{4} + \frac{1}{2}$

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

4 Add these unlike fractions. The fraction wall may help.

				1 w	hole				
1/2									
		1/4		2 4			3 4		4/4
	1 3	2/8	3 8	4 8		<u>5</u>	6 8	7/8	8
1/5			2	2	3 5		4/5		<u>5</u>
10	<u>2</u>	<u>3</u>	3 4 0 10	5 10	6 10	7/10	<u>8</u> 10	9	10 10

a
$$\frac{1}{2} + \frac{3}{8} =$$
 g

$$\mathbf{g} \quad \frac{3}{5} + \frac{1}{10} =$$

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

b
$$\frac{3}{4} + \frac{1}{8} =$$
 h $\frac{7}{10} + \frac{1}{5} =$

c
$$\frac{1}{2} + \frac{1}{8} =$$
 i $\frac{7}{10} + \frac{3}{5} =$

$$\frac{7}{10} + \frac{3}{5} =$$

d
$$\frac{1}{2} + \frac{3}{10} =$$
 j $\frac{3}{4} + \frac{7}{8} =$

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

$$e \frac{1}{2} + \frac{1}{10} =$$

e
$$\frac{1}{2} + \frac{1}{10} =$$
 k $\frac{4}{5} + \frac{5}{10} =$

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

$$\frac{1}{2} + \frac{7}{10} =$$

When two denominators are unrelated you will need to search for the lowest common denominator. You may need to multiply the denominators to find the LCM.

For example, the LCM of thirds and fifths is fifteenths.

E.g.:
$$\frac{2}{3} + \frac{1}{5} = \frac{2 \times 5}{3 \times 5} + \frac{1 \times 3}{5 \times 3}$$

= $\frac{10}{15} + \frac{3}{15}$
= $\frac{13}{15}$

5 Add or subtract these unlike fractions.

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

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

$$k \frac{3}{4} - \frac{2}{3} =$$

b
$$\frac{1}{3} + \frac{1}{5} =$$

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

$$\frac{3}{5} - \frac{3}{10} =$$

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

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

$$\frac{4}{5} - \frac{1}{2} =$$

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

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

$$n \frac{3}{4} - \frac{1}{3} =$$

$$e \frac{7}{10} + \frac{1}{3} =$$

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

$$o \frac{5}{10} - \frac{1}{4} =$$

6 Add or subtract these unlike fractions. You will need to convert some answers to mixed

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

$$f \frac{2}{3} + \frac{3}{4} =$$

$$k \frac{4}{5} - \frac{1}{3} =$$

b
$$\frac{4}{5} + \frac{1}{4} =$$

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

$$=$$
 $\frac{3}{4} - \frac{1}{3} =$

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

$$h \frac{2}{3} + \frac{2}{5} =$$

$$=$$
 $m \frac{4}{5} - \frac{2}{3} =$

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

$$h \frac{2}{3} + \frac{2}{5} =$$

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

d
$$\frac{3}{5} + \frac{2}{3} =$$

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

$$e^{\frac{3}{5} + \frac{3}{4}} =$$

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

$$\frac{1}{2} - \frac{2}{5} =$$