Adding fractions

Add fractions with the same denominator and denominators that are multiples of the same number.

Challenge 1

1 Add these fractions.

a $\frac{3}{5} + \frac{1}{5}$ b $\frac{5}{8} + \frac{2}{8}$ c $\frac{4}{6} + \frac{3}{6}$ d $\frac{6}{8} + \frac{5}{8}$

e $\frac{4}{5} + \frac{3}{5}$ f $\frac{7}{10} + \frac{6}{10}$ g $\frac{6}{9} + \frac{8}{9}$ h $\frac{7}{12} + \frac{6}{12}$

2 Write two different fraction additions for each answer.

Example

$\frac{8}{11} = \frac{2}{11} + \frac{6}{11}$

$= \frac{5}{11} + \frac{3}{11}$

a $\frac{7}{9}$ b $\frac{12}{15}$ c $\frac{7}{10}$ d $\frac{9}{11}$

e $\frac{10}{12}$ f $\frac{13}{16}$ g $\frac{8}{13}$ h $\frac{14}{16}$

Challenge 2

1 Add these fractions.

a $\frac{2}{5} + \frac{6}{10}$ b $\frac{1}{2} + \frac{4}{10}$ c $\frac{2}{4} + \frac{1}{3}$ d $\frac{5}{10} + \frac{1}{2}$ e $\frac{1}{2} + \frac{1}{5}$

f $\frac{2}{3} + \frac{1}{2}$ g $\frac{5}{10} + \frac{1}{3}$ h $\frac{2}{3} + \frac{3}{4}$ i $\frac{1}{5} + \frac{3}{10}$ j $\frac{1}{3} + \frac{5}{6}$

k $\frac{1}{4} + \frac{3}{8}$ l $\frac{2}{5} + \frac{4}{10}$ m $\frac{3}{4} + \frac{1}{2}$ n $\frac{1}{6} + \frac{4}{12}$ o $\frac{2}{3} + \frac{4}{6}$

2 Look at Question 1d. This calculation could be done without converting the fraction. Explain how.

3 Work out these fraction problems.

a Louis and Amy are putting books away in the library. After ten minutes Louis has managed to put $\frac{1}{4}$ of the books away and Amy has put away $\frac{2}{3}$. What fraction of the books have they put away altogether?

b Sam is reading a really good book. Last night he read $\frac{1}{2}$ of it, and this morning he read another $\frac{3}{8}$. How much has he read so far?

c Annie got given some money for her birthday. She bought a new dress that used $\frac{3}{5}$ of her money and then she spent $\frac{1}{4}$ of her money on a matching bag. What fraction of her money is left?

d Jamila's mum is saving up for their holiday. One month she saved $\frac{3}{10}$ of the target amount; the next month she saved $\frac{2}{20}$ of the target. What fraction has she saved so far?

4 Write two fraction problems for a partner to work out.

Challenge 3

1 Add these fractions.

a $\frac{6}{7} + \frac{1}{4}$ b $\frac{3}{5} + \frac{13}{15}$ c $\frac{2}{4} + \frac{1}{10}$ d $\frac{4}{6} + \frac{1}{4}$ e $\frac{3}{9} + \frac{2}{4}$

f $\frac{2}{3} + \frac{3}{8}$ g $\frac{4}{6} + \frac{4}{7}$ h $\frac{5}{11} + \frac{2}{3}$ i $\frac{2}{6} + \frac{3}{8}$ j $\frac{1}{3} + \frac{6}{7}$

2 Write your answers to Question 1 as mixed numbers.

Example

$\frac{13}{9} = 1\frac{4}{9}$