

# National 5: Subtracting Fractions

Study this example

$$\begin{aligned} & 9\frac{3}{10} - 7\frac{4}{5} \\ &= 9\frac{3}{10} - 7\frac{8}{10} \quad \leftarrow \text{Make a common denominator. Here, it's 10 because 5 is a factor of 10.} \\ &= 8\frac{13}{10} - 7\frac{8}{10} \quad \leftarrow 3 - 8 \text{ is negative, so we split the 9 into } 8\frac{10}{10}, \text{ which combines with the } \frac{3}{10}. \\ &= 1\frac{5}{10} \quad \leftarrow \text{Subtract the whole numbers: } 8 - 7. \text{ Then subtract the numerators: } 13 - 8. \\ &= 1\frac{1}{2} \quad \leftarrow \text{Finally, make sure that your answer is fully simplified.} \end{aligned}$$

**Q1** Simple questions with no whole numbers or negative numerators. Show all your working.

a)  $\frac{4}{5} - \frac{1}{5}$

b)  $\frac{4}{5} - \frac{1}{10}$

c)  $\frac{1}{2} - \frac{1}{3}$

d)  $\frac{3}{4} - \frac{1}{6}$

e)  $\frac{4}{7} - \frac{3}{8}$

f)  $\frac{5}{6} - \frac{2}{9}$

**Q2** These questions won't have a negative numerator. Show all your working.

a)  $5\frac{7}{10} - 1\frac{2}{5}$

b)  $6\frac{5}{8} - 3\frac{1}{3}$

c)  $9\frac{13}{16} - 1\frac{3}{4}$

d)  $10\frac{5}{6} - 4\frac{1}{8}$

e)  $7\frac{4}{5} - 5\frac{2}{15}$

f)  $3\frac{5}{6} - \frac{3}{4}$

**Q3** In these questions, the numerators will subtract to a negative number, so you will have to split the first whole number, as shown in the example at the top.

a)  $5\frac{3}{10} - 2\frac{2}{5}$

b)  $6\frac{1}{8} - 3\frac{2}{3}$

c)  $9\frac{1}{5} - 8\frac{3}{4}$

d)  $4\frac{3}{8} - 2\frac{4}{5}$

e)  $7\frac{1}{2} - 6\frac{4}{7}$

f)  $4\frac{1}{3} - \frac{5}{12}$

**Q4** Mixed question types. Always give your answer in its lowest terms.

a)  $3\frac{3}{4} - 1\frac{7}{8}$

b)  $6\frac{5}{8} - \frac{7}{12}$

c)  $7\frac{2}{15} - 2\frac{13}{20}$

d)  $8\frac{5}{6} - \frac{4}{9}$

e)  $6\frac{2}{7} - 5\frac{13}{21}$

f)  $4\frac{1}{9} - \frac{5}{18}$

g)  $9\frac{1}{4} - 1\frac{5}{6}$

h)  $4\frac{2}{5} - 3\frac{5}{8}$

i)  $5\frac{5}{12} - \frac{7}{9}$

j)  $7\frac{1}{2} - 6\frac{23}{40}$

k)  $7\frac{8}{9} - 5\frac{5}{8}$

l)  $4\frac{2}{7} - 1\frac{3}{4}$

m)  $6\frac{5}{6} - 4\frac{9}{10}$

n)  $7\frac{1}{3} - 2\frac{4}{5}$

o)  $8\frac{5}{6} - 3\frac{5}{7}$