

National 5: Adding Fractions

Study this example

$$\begin{aligned} & 3\frac{7}{10} + 2\frac{11}{15} && \leftarrow \text{The common denominator is the lowest common multiple of 10 and 15.} \\ & = 3\frac{21}{30} + 2\frac{22}{30} && \leftarrow \text{The 1}^{\text{st}} \text{ fraction is } \times 3 \text{ top and bottom. The 2}^{\text{nd}} \text{ fraction is } \times 2 \text{ top and bottom.} \\ & = 5\frac{43}{30} && \leftarrow \text{Add the whole numbers: } 3 + 2 = 5. \text{ Then add the numerators: } 21 + 22 = 43. \\ & = 6\frac{13}{30} && \leftarrow \frac{30}{30} = 1 \text{ so add 1 to the whole number and subtract } \frac{30}{30} \text{ from the fraction.} \\ & && \text{Finally, make sure that your answer is fully simplified. In this example, it is.} \end{aligned}$$

Q1 Simple questions with no whole numbers. Always simplify your final answer.

a) $\frac{3}{8} + \frac{4}{8}$

b) $\frac{5}{8} + \frac{3}{8}$

c) $\frac{3}{8} + \frac{1}{2}$

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

e) $\frac{1}{6} + \frac{3}{4}$

f) $\frac{2}{9} + \frac{2}{6}$

Q2 In these questions, the fractions will add to an improper fraction, so you will need to convert $\frac{10}{10}$, $\frac{12}{12}$, $\frac{20}{20}$ etc to the whole number 1. Always simplify your final answer fully.

a) $\frac{9}{10} + \frac{7}{10}$

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

c) $2\frac{4}{5} + 3\frac{3}{4}$

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

e) $4\frac{3}{4} + 1\frac{4}{7}$

f) $4\frac{11}{14} + 3\frac{1}{4}$

g) $1\frac{7}{8} + \frac{1}{4}$

h) $\frac{7}{10} + 2\frac{3}{5}$

i) $1\frac{7}{12} + 2\frac{5}{8}$

Q3 Mixed question types. Always give your answer in its lowest terms.

a) $1\frac{1}{2} + 2\frac{1}{2}$

b) $\frac{2}{5} + 3\frac{3}{10}$

c) $2\frac{5}{8} + \frac{2}{9}$

d) $2\frac{7}{9} + 3\frac{5}{6}$

e) $4\frac{7}{18} + 1\frac{5}{9}$

f) $2\frac{5}{8} + 2\frac{3}{4}$

g) $3\frac{2}{9} + 1\frac{11}{12}$

h) $5\frac{1}{4} + 6\frac{3}{7}$

i) $1\frac{5}{12} + 4\frac{1}{7}$

j) $\frac{1}{8} + \frac{1}{2} + \frac{1}{8}$

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

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

m) $\frac{2}{7} + \frac{1}{2} + \frac{3}{4}$

n) $1\frac{1}{6} + \frac{2}{3} + \frac{5}{12}$

o) $4\frac{23}{75} + 1\frac{3}{25}$

p) $3\frac{11}{20} + 2\frac{3}{50}$

q) $7\frac{5}{12} + 8\frac{41}{60}$

r) $6\frac{13}{15} + 7\frac{5}{8}$