Equivalent fractions and addition

Change the denominator by multiplying or dividing the top and bottom by the same non-zero number.

Calculate 3/4 − 1/6.

$\frac{3}{4}=\frac{9}{12}$	Multiply top and bottom by 3.
$\frac{1}{6}=\frac{2}{12}$	Multiply top and bottom by 2.
$\frac{9}{12}-\frac{2}{12}=\frac{9-2}{12}$	Subtract the numerators and keep the common denominator.

$\frac{7}{12}$

Mixed numbers

To convert 2¾ to an improper fraction, write 2 as 8 quarters, then add 3 quarters to get 11 quarters.

Multiplication and division

For multiplication, cancel common factors. For division, flip only the second fraction.

Calculate 3/10 × 5/9.

$\frac{3\times5}{10\times9}$	Multiply the numerators and denominators.
$\frac{1}{2\times3}$	Cancel 5 with 10 and 3 with 9.

$\frac{1}{6}$

Calculate 3/5 ÷ 9/10.

$\frac{3}{5}\times\frac{10}{9}$	Multiply by the reciprocal of 9/10.
$\frac{3\times10}{5\times9}$	Cancel common factors: 10 ÷ 5 = 2 and 9 ÷ 3 = 3.

$\frac{2}{3}$

JUNIOR CYCLE HIGHER LEVEL · CHAPTER PRACTICE

Fractions

Try the questions before opening the separate answer key. Show one step per line.

3.1 · Fluency

Simplify 42/56.

3.2 · Variation

Calculate 5/6 − 1/4.

3.3 · Choose a method

A tank is 3/5 full. One quarter of the water currently in it is used. What fraction of the full tank remains?

Check your work: are the sign, units and level of accuracy appropriate?