

National 5 Homework : 1 year course
Fractions & Algebraic Fractions

1. Copy and complete

(a) $2\frac{3}{8} + 4\frac{1}{4}$ (b) $5\frac{3}{4} - 1\frac{2}{3}$ (c) $\frac{3}{4} \times \frac{2}{5}$ (d) $\frac{5}{6} \div \frac{2}{3}$
(e) $1\frac{5}{6} + 3\frac{3}{4}$ (f) $6\frac{1}{8} - 2\frac{3}{10}$ (g) $2\frac{7}{10} \times 4\frac{2}{3}$ (h) $6\frac{3}{4} \div 5\frac{5}{8}$

2. Simplify these fractions:

(a) $\frac{y^2}{y}$ (b) $\frac{9x}{6x^2}$ (c) $\frac{10a^2b}{4ab^2}$ (d) $\frac{2(x+1)(x-2)}{10(x+3)(x+1)}$

3. Factorise the numerator and/or the denominator, then simplify:

(a) $\frac{x+2}{4x+8}$ (b) $\frac{x^2+2x-15}{5x+25}$

4. Express each of the following as a single fraction and simplify where possible:

(a) $\frac{3}{8k} \times \frac{2k}{21}$ (b) $\frac{pq}{2} \times \frac{q}{p}$ (c) $\frac{3m}{7} \div \frac{15m}{56}$ (d) $\frac{h^2}{t} \div \frac{9h}{3t}$

5. By finding a common denominator work out these additions/subtractions.

(a) $\frac{2x}{4} + \frac{5x}{3}$ (b) $\frac{3}{m} - \frac{7}{n}$ (c) $\frac{1}{g^2} + \frac{1}{g}$ (d) $\frac{x+4}{2} - \frac{x+1}{3}$