FRACTIONS

Level 2

OPERATIONS **with FRACTIONS** **Addition, Subtraction, Multiplication, Division.**

We cannot add unlike terms. Similarly we cannot add/subtract directly $\frac{2}{3}\ and\ \frac{3}{5}$

We must change the fractions so that they have the same or a COMMON DENOMINATOR $\frac{2}{3}\ becomes\ \frac{10}{15}$ and $\frac{3}{5}\ becomes\ \frac{9}{15}$ Now we can add (or subtract) to give $\frac{19}{15} = 1\frac{4}{15}$

For **Multiplication** we convert to improper fractions and multiply the numerators and denominators. For **Division** we convert to improper fractions and then inverse the one we are dividing by and proceed as per multiplication.

Examples

$\frac{3}{4} + \frac{2}{5} = \frac{15}{20} + \frac{8}{20} = \frac{23}{20} = 1\frac{3}{20}$ $4\frac{5}{8} - 2\frac{1}{3} = 2\frac{15}{24} - \frac{8}{24} = 2\frac{7}{24}$

Practise

$2\frac{1}{2} \times 1\frac{3}{5} = \frac{5}{2} \times \frac{8}{5} = \frac{40}{10} = 4$ $4\frac{4}{5} \div 3\frac{3}{5} = \frac{24}{5} \times \frac{5}{18} = \frac{24}{18} = 1\frac{1}{3}$

1

a) $\frac{2}{3} + \frac{2}{3}$ b) $\frac{3}{4} + \frac{5}{4}$ c) $\frac{2}{7} = \frac{4}{7}$ d) $\frac{4}{5} + \frac{1}{3}$

e) $\frac{3}{8} - \frac{1}{4}$ f) $\frac{7}{9} - \frac{2}{7}$ g) $2\frac{2}{3} - 1\frac{1}{3}$ h) $3\frac{3}{4} - 1\frac{1}{2}$

2

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

e) $\frac{5}{6} - \frac{3}{8}$ f) $3\frac{2}{3} - 1\frac{2}{5}$ g) $5\frac{2}{7} - 2\frac{1}{2}$ h) $5\frac{1}{6} - 2\frac{2}{3}$

3

a) $\frac{2}{3} \times \frac{5}{7}$ b) $\frac{5}{6} \times \frac{7}{11}$ c) $1\frac{7}{9} \times \frac{3}{4}$ d) $2\frac{4}{5} \times \frac{5}{7}$

e) $2\frac{1}{7} \times 2\frac{4}{5}$ f) $2\frac{5}{8} \times 3\frac{3}{7}$ g) $3\frac{5}{7} \times 1\frac{1}{13}$ h) $2\frac{4}{9} \times 2\frac{5}{11}$

4

a) $3\frac{1}{2} \div 4\frac{2}{3}$ b) $5\frac{2}{5} \div \frac{4}{5}$ c) $4\frac{4}{9} \div 4\frac{1}{5}$ d) $1\frac{10}{11} \div 4\frac{2}{3}$

e) $6\frac{1}{4} \div 9\frac{3}{8}$ f) $7\frac{2}{9} \div 2\frac{3}{5}$ g) $3\frac{1}{3} \div 11\frac{2}{3}$ h) $10\frac{2}{3} \div 1\frac{3}{5}$

j) $2\frac{5}{8} + 3\frac{4}{7}$ k) $7\frac{2}{7} - 2\frac{2}{3}$ m) $7\frac{1}{7} \times 5\frac{9}{10}$ n) $11\frac{4}{7} \div 4\frac{2}{3}$