

Mixed Fractions \leftrightarrow Improper Fractions KEY

Write the following mixed numbers as improper fractions.

a) $1\frac{7}{8} = \frac{15}{8}$

$1 \times 8 + 7 = 15$

b) $2\frac{1}{2} = \frac{5}{2}$

c) $1\frac{6}{9} = \frac{15}{9}$

d) $1\frac{2}{6} = \frac{8}{6}$

e) $1\frac{2}{3} = \frac{5}{3}$

f) $1\frac{5}{9} = \frac{14}{9}$

g) $1\frac{4}{7} = \frac{11}{7}$

h) $2\frac{1}{3} = \frac{7}{3}$

i) $1\frac{4}{5} = \frac{9}{5}$

j) $5\frac{3}{8} = \frac{43}{8}$

k) $3\frac{2}{7} = \frac{23}{7}$

l) $4\frac{1}{5} = \frac{21}{5}$

Write the following improper fractions as simplified mixed numbers.

a) $\frac{5}{2} = 2\frac{1}{2}$

b) $\frac{11}{8} = 1\frac{3}{8}$

c) $\frac{13}{6} = 2\frac{1}{6}$

d) $\frac{17}{8} = 2\frac{1}{8}$

e) $\frac{14}{8} = 1\frac{6}{8} = 1\frac{3}{4}$

f) $\frac{8}{6} = 1\frac{2}{6} = 1\frac{1}{3}$

g) $\frac{10}{9} = 1\frac{1}{9}$

h) $\frac{13}{7} = 1\frac{6}{7}$

i) $\frac{17}{9} = 1\frac{8}{9}$

j) $\frac{10}{8} = 1\frac{2}{8} = 1\frac{1}{4}$

k) $\frac{22}{4} = 5\frac{2}{4} = 5\frac{1}{2}$

l) $\frac{61}{9} = 6\frac{7}{9}$

Adding & Subtracting Fractions KEY

Find the simplified solution to the fraction questions below.

$$a) \frac{2}{4} + \frac{1}{4} = \frac{3}{4}$$

$$b) \frac{2}{3} + \frac{1}{5} = \frac{2 \times 5}{3 \times 5} + \frac{1 \times 3}{5 \times 3} = \frac{10}{15} + \frac{3}{15} = \frac{13}{15}$$

$$c) 1\frac{5}{7} - \frac{6}{7} = \frac{12}{7} - \frac{6}{7} = \frac{6}{7}$$

$$d) 1\frac{4}{9} - \frac{2}{3} = \frac{13}{9} - \frac{2 \times 3}{3 \times 3} = \frac{13}{9} - \frac{6}{9} = \frac{7}{9}$$

$$e) 2\frac{2}{5} - \frac{3}{4} = \frac{12 \times 4}{5 \times 4} - \frac{3 \times 5}{4 \times 5} = \frac{48}{20} - \frac{15}{20} = \frac{33}{20} = 1\frac{13}{20}$$

$$f) 1\frac{1}{4} - \frac{2}{3} = \frac{5 \times 3}{4 \times 3} - \frac{2 \times 4}{3 \times 4} = \frac{15}{12} - \frac{8}{12} = \frac{7}{12}$$

$$g) 3\frac{7}{9} + \frac{1}{3} = \frac{35}{9} + \frac{1 \times 3}{3 \times 3} = \frac{34}{9} + \frac{3}{9} = \frac{37}{9} = 4\frac{1}{9}$$

$$h) 2\frac{5}{6} - \frac{7}{9} = \frac{17 \times 3}{6 \times 3} - \frac{7 \times 2}{9 \times 2} = \frac{51}{18} - \frac{14}{18} = \frac{37}{18} = 2\frac{1}{18}$$

$$i) 1\frac{3}{4} - 1\frac{4}{7} = \frac{7 \times 7}{4 \times 7} - \frac{11 \times 4}{7 \times 4} = \frac{49}{28} - \frac{44}{28} = \frac{5}{28}$$

$$j) 3\frac{5}{9} + 2\frac{2}{3} = \frac{32}{9} + \frac{8 \times 3}{3 \times 3} = \frac{32}{9} + \frac{24}{9} = \frac{56}{9} = 6\frac{2}{9}$$

$$k) 2\frac{3}{9} + 1\frac{5}{7} = \frac{21 \times 7}{9 \times 7} + \frac{12 \times 9}{7 \times 9} = \frac{147}{63} + \frac{108}{63} = \frac{255}{63} = 4\frac{3}{63} = 4\frac{1}{21}$$

$$l) 4\frac{3}{4} - 2\frac{2}{3} = \frac{19 \times 3}{4 \times 3} - \frac{8 \times 4}{3 \times 4} = \frac{57}{12} - \frac{32}{12} = \frac{25}{12} = 2\frac{1}{12}$$

$$m) 6\frac{2}{5} + 8\frac{1}{2} - 5\frac{7}{15} = \frac{32 \times 6}{5 \times 6} + \frac{17 \times 15}{2 \times 15} - \frac{82 \times 2}{15 \times 2} =$$

$$\frac{192}{30} + \frac{255}{30} - \frac{164}{30} = \frac{283}{30} = 9\frac{13}{30}$$

$$n) 9\frac{5}{6} - 4\frac{1}{4} + \frac{4}{3} = \frac{59 \times 2}{6 \times 2} - \frac{17 \times 3}{4 \times 3} + \frac{4 \times 4}{3 \times 4} =$$

$$\frac{118}{12} - \frac{51}{12} + \frac{16}{12} = \frac{83}{12} = 6\frac{11}{12}$$

$$o) \frac{11}{8} + 3\frac{3}{4} - 1\frac{1}{6} + \frac{5}{2} = \frac{11 \times 3}{8 \times 3} + \frac{15 \times 6}{4 \times 6} - \frac{7 \times 4}{6 \times 4} + \frac{5 \times 12}{2 \times 12}$$

$$\frac{33}{24} + \frac{90}{24} - \frac{28}{24} + \frac{60}{24} = \frac{155}{24} = 6\frac{11}{24}$$

$$p) \frac{4}{9} + 3\frac{2}{3} - \frac{13}{6} + 4 = \frac{4 \times 2}{9 \times 2} + \frac{11 \times 6}{3 \times 6} - \frac{13 \times 3}{6 \times 3} + \frac{4 \times 18}{1 \times 18}$$

$$\frac{8}{18} + \frac{66}{18} - \frac{39}{18} + \frac{72}{18} = \frac{107}{18} = 5\frac{17}{18}$$

$$155 - 144 = 11$$

$$6\frac{11}{24}$$