

# Mixed Number Arithmetic

## Addition and Subtraction

$$\begin{aligned}\text{Ex1} \quad 2\frac{2}{3} + 1\frac{1}{4} \\ &= 3\frac{8+3}{12} \\ &= 3\frac{11}{12}\end{aligned}$$

$$\begin{aligned}\text{Ex2} \quad 4\frac{3}{5} + 1\frac{3}{4} \\ &= 5\frac{12+15}{20} \\ &= 5\frac{27}{20} \\ &= 6\frac{7}{20}\end{aligned}$$

## Exercise

$$\begin{aligned}1) \quad 3\frac{1}{3} + 2\frac{1}{2} \\ &= 5\frac{2+3}{6} \\ &= 5\frac{5}{6}\end{aligned}$$

$$\begin{aligned}2) \quad 4\frac{1}{2} + 1\frac{4}{5} \\ &= 5\frac{5+8}{10} \\ &= 5\frac{13}{10} \\ &= 6\frac{3}{10}\end{aligned}$$

$$\begin{aligned}3) \quad 2\frac{3}{4} + 1\frac{4}{7} \\ &= 3\frac{21+16}{28} \\ &= 3\frac{37}{28} \\ &= 4\frac{9}{28}\end{aligned}$$

$$\begin{aligned}4) \quad 3\frac{1}{4} + 1\frac{2}{5} \\ &= 4\frac{5+8}{20} \\ &= 4\frac{13}{20}\end{aligned}$$

$$\begin{aligned}5) \quad 1\frac{7}{8} + 1\frac{1}{3} \\ &= 2\frac{21+8}{24} \\ &= 2\frac{29}{24} \\ &= 3\frac{5}{24}\end{aligned}$$

# Subtraction

$$\begin{aligned}\text{Ex 1} \quad & 8\frac{4}{5} - 1\frac{1}{4} \\ & = 7\frac{16-5}{20} \\ & = 7\frac{11}{20}\end{aligned}$$

$$\begin{aligned}\text{Ex 2} \quad & 6\frac{1}{2} - 1\frac{4}{5} \\ & = 4\cancel{8}^{\text{10+}}\frac{5-8}{10} \\ & = 4\frac{7}{10}\end{aligned}$$

$$\begin{aligned}\text{Ex 3} \quad & 7\frac{7}{8} - 1\frac{2}{3} \\ & = 6\frac{21-16}{24} \\ & = 6\frac{5}{24}\end{aligned}$$

$$\begin{aligned}\text{Ex 4} \quad & 5\frac{1}{3} - 1\frac{5}{7} \\ & = 3\cancel{4}^{\text{21+}}\frac{7-15}{21} \\ & = 3\frac{13}{21}\end{aligned}$$

## Exercise

$$\begin{aligned}1) \quad & 7\frac{3}{4} - 1\frac{1}{3} \\ & = 6\frac{9-4}{12} \\ & = 6\frac{5}{12}\end{aligned}$$

$$\begin{aligned}2) \quad & 5\frac{1}{2} - 1\frac{2}{3} \\ & = 3\cancel{4}^{\text{6+}}\frac{3-4}{6} \\ & = 3\frac{5}{6}\end{aligned}$$

$$\begin{aligned}3) \quad & 6\frac{7}{8} - 1\frac{1}{3} \\ & = 5\frac{21-8}{24} \\ & = 5\frac{13}{24}\end{aligned}$$

$$\begin{aligned}4) \quad & 4\frac{1}{5} - 1\frac{1}{3} \\ & = 2\cancel{8}^{\text{15+}}\frac{3-5}{15} \\ & = 2\frac{13}{15}\end{aligned}$$

$$5) \quad 10\frac{1}{4} - 2\frac{3}{5}$$

$$= 7\cancel{8}^{\cancel{20}+} \frac{5-12}{20}$$

$$= 7\frac{13}{20}$$

$$6) \quad 8\frac{1}{5} - 2\frac{3}{4}$$

$$= 5\cancel{6}^{\cancel{20}+} \frac{4-15}{20}$$

$$= 5\frac{9}{20}$$

$$7) \quad 9\frac{1}{2} - 1\frac{2}{5}$$

$$= 8\frac{5-4}{10}$$

$$= 8\frac{1}{10}$$

$$8) \quad 7\frac{1}{4} - 2\frac{3}{7}$$

$$= 4\cancel{5}^{\cancel{28}+} \frac{7-12}{28}$$

$$= 4\frac{23}{28}$$

$$9) \quad 7\frac{5}{6} - 1\frac{1}{2}$$

$$= 6\frac{5-3}{6}$$

$$= 6\frac{2}{6}$$

$$= 6\frac{1}{3}$$

$$10) \quad 8\frac{1}{3} - 1\frac{4}{5}$$

$$= 6\cancel{7}^{\cancel{15}+} \frac{5-12}{15}$$

$$= 6\frac{8}{15}$$

### Homework

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

$$4) \quad 8\frac{4}{5} - 1\frac{1}{3}$$

$$2) \quad 6\frac{1}{4} - 1\frac{2}{3}$$

$$5) \quad 6\frac{1}{10} + 1\frac{1}{3}$$

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

$$6) \quad 7\frac{1}{2} - 1\frac{3}{4}$$

$$7) \quad 5\frac{1}{5} + 2\frac{3}{4}$$