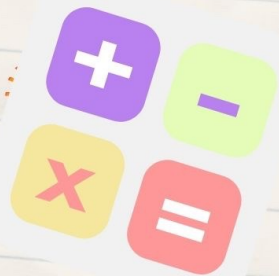




# Fractions



$\frac{1}{2}$



1. Without using a calculator and showing all your working, calculate.

$$4\frac{1}{3} \div 2\frac{1}{2}$$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} \frac{13}{3} \div \frac{5}{2} &= \frac{13}{3} \times \frac{2}{5} \\ &= \frac{26}{15} = 1\frac{11}{15} \leftarrow \end{aligned}$$

2. Without using a calculator, and showing all your working, evaluate

$$3\frac{2}{3} \oplus 2\frac{4}{5}$$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} \frac{11 \times 5}{3 \times 5} + \frac{14 \times 3}{5 \times 3} &= \frac{55 + 42}{15} \\ &= \frac{97}{15} \\ &= 6\frac{7}{15} \end{aligned}$$

3. Without using a calculator and showing all your working, calculate

$$2\frac{7}{10} \times 3\frac{5}{9}$$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} \frac{27}{10} \times \frac{35}{9} &= \frac{48}{5} \\ &= 9\frac{3}{5} \end{aligned}$$

4. Without using a calculator and showing all your working , evaluate.

$$3\frac{1}{8} \times 2\frac{4}{5}$$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} \frac{25}{8} \times \frac{14}{5} &= \frac{35}{4} \\ &= 8\frac{3}{4} \end{aligned}$$

5. Without using a calculator and showing all your working , evaluate

$$3\frac{3}{4} \div \frac{5}{8}$$

Give your answer in its simplest form.

$$\begin{aligned} \frac{15}{4} \div \frac{5}{8} &= \frac{15}{4} \times \frac{8}{5} \\ &= 6 \end{aligned}$$

6. Show that

$$1\frac{1}{3} \times 2\frac{2}{5} = 3\frac{1}{5}$$

Show your working clearly.

$$\frac{4}{3} \times \frac{12}{5} = \frac{16}{5} = 3\frac{1}{5}$$

Shown

7. Without using a calculator and showing all your working, work out

$$\underline{3\frac{1}{4} \times 2\frac{2}{3}}$$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} \frac{13}{4} \times \frac{8}{3} &= \frac{26}{3} \\ &= 8\frac{2}{3} \end{aligned}$$

8. Without using a calculator and showing all your working, work out

$$\underline{5\frac{5}{8} - 3\frac{3}{4}}$$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} \frac{45}{8} - \frac{15 \times 2}{4 \times 2} &= \frac{45 - 30}{8} \\ &= \frac{15}{8} = 1\frac{7}{8} \end{aligned}$$

9. Without using a calculator and showing all your working, evaluate

$$\underline{5\frac{1}{3} \div 2\frac{3}{5}}$$

Give your answer as a mixed number in its simplest form.

$$\begin{aligned} \frac{16}{3} \div \frac{13}{5} &= \frac{16}{3} \times \frac{5}{13} \\ &= \frac{80}{39} = 2\frac{2}{39} \end{aligned}$$

$$\begin{array}{r} 1 \\ 39 \\ \times 2 \\ \hline 78 \end{array}$$

10. Show that

$$4\frac{2}{7} \div \frac{5}{21} = 18$$
$$\begin{array}{c} \uparrow \\ \frac{30}{7} \times \frac{21}{5} = 18 \\ \text{shown} \end{array}$$

11. Work out  $2\frac{1}{4} \div 3\frac{5}{6}$

Show your working clearly and give your answer as a fraction in its simplest form.

$$\frac{9}{4} \div \frac{23}{6} = \frac{9}{4} \times \frac{6}{23}$$
$$= \frac{27}{46}$$

12. Working using a calculator and showing all your working, work out

$$2\frac{3}{4} \div \frac{11}{12}$$

Give your answer in its simplest form.

$$\frac{11}{4} \div \frac{11}{12} = \frac{11}{4} \times \frac{12}{11}$$
$$= 3$$

13. Without using a calculator and showing all your working, evaluate

$$2\frac{1}{4} \times 2\frac{2}{3}$$

Give your answer in its simplest form.

$$\frac{9}{4} \times \frac{8}{3} = 6$$