

FRACTIONS OPERATIONS

**Task 1 – Add or subtract the following fractions.
Fully simplify your answers.**

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

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

$$3) \frac{1}{3} + \frac{2}{9} = \frac{5}{9}$$

$$4) \frac{5}{8} - \frac{1}{8} = \frac{1}{2}$$

$$5) \frac{3}{7} + \frac{2}{7} = \frac{5}{7}$$

$$6) \frac{2}{3} - \frac{1}{6} = \frac{1}{2}$$

$$7) \frac{4}{9} + \frac{1}{3} = \frac{7}{9}$$

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

$$9) \frac{3}{4} + \frac{1}{6} = \frac{11}{12}$$

$$10) \frac{3}{5} - \frac{1}{8} = \frac{19}{40}$$

$$11) \frac{7}{10} + \frac{11}{15} = \frac{43}{30} = 1 \frac{13}{30}$$

$$12) \frac{5}{6} - \frac{1}{7} = \frac{29}{42}$$

$$13) \frac{3}{12} + \frac{4}{15} = \frac{31}{60}$$

$$14) \frac{7}{8} - \frac{1}{3} = \frac{13}{24}$$

$$15) \frac{2}{3} + \frac{5}{6} = \frac{3}{2} = 1 \frac{1}{2}$$

$$18) \frac{4}{7} \times \frac{2}{3} = \frac{8}{21}$$

$$19) \frac{5}{6} \div \frac{1}{2} = \frac{5}{3}$$

$$20) \frac{2}{5} \times \frac{3}{8} = \frac{3}{20}$$

$$21) \frac{3}{4} \div \frac{1}{3} = \frac{9}{4} = 2 \frac{1}{4}$$

$$22) \frac{1}{2} \times \frac{2}{9} = \frac{1}{9}$$

$$23) \frac{4}{5} \div \frac{2}{3} = \frac{6}{5} = 1 \frac{1}{5}$$

$$24) \frac{5}{8} \times \frac{3}{10} = \frac{3}{16}$$

$$25) \frac{1}{6} \div \frac{1}{2} = \frac{1}{3}$$

$$26) \frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$$

$$27) \frac{7}{8} \div \frac{1}{4} = \frac{7}{2}$$

$$28) \frac{1}{3} \div \frac{2}{5} = \frac{5}{6}$$

$$29) \frac{2}{7} \times \frac{3}{5} = \frac{6}{35}$$

$$30) \frac{5}{9} \div \frac{5}{6} = \frac{2}{3}$$

Task 3

31) Holly drank $\frac{2}{5}$ of a 1-litre bottle of water.
How much of the bottle did she drink in litres?

$\frac{2}{5}$ litres

32) A recipe needs $\frac{3}{4}$ cup of sugar. How many cups are needed for 2 batches?

$$\frac{3}{4} \times \frac{2}{1} = \frac{6}{4} = \frac{3}{2}$$

$1 \frac{1}{2}$ cups

**Task 2 – Multiply or divide the following fractions.
Fully simplify your answers.**

$$16) \frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$$

$$17) \frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$$

33) Tom reads $\frac{1}{6}$ of his book each day. How much will he read in 3 days?

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

$\frac{1}{2}$ of the book

34) Emma has eaten $\frac{2}{3}$ of a cake. Then she gives $\frac{1}{2}$ of what's left to her brother. What fraction of the cake does her brother get?

$$1 - \frac{2}{3}$$

$$= \frac{3}{3} - \frac{2}{3}$$

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

$$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$$

35) Liam cycled $\frac{3}{8}$ of his route before lunch and $\frac{1}{4}$ after lunch. How much did he cycle altogether?

$$\frac{3}{8} + \frac{1}{4}$$

$$= \frac{3}{8} + \frac{2}{8}$$

$$= \frac{5}{8}$$

36) A jug contains $\frac{5}{6}$ of a litre of juice. If you pour out $\frac{1}{2}$ a litre, how much is left?

$$\frac{5}{6} - \frac{1}{2}$$

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

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

$\frac{1}{3}$ litre is left

37) Lucy buys $\frac{1}{2}$ metre of ribbon. She cuts it into 4 equal pieces. How long is each piece?

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

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

$$= \frac{1}{8} \text{ metre}$$

38) Calculate and fully simplify:

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

$$\frac{1}{8} + \frac{2}{4} = \frac{1}{8} + \frac{4}{8} = \frac{5}{8}$$

$$\frac{5}{8} + \frac{3}{5} = \frac{25}{40} + \frac{24}{40} = \frac{49}{40} = 1\frac{9}{40}$$

39) Calculate and fully simplify:

$$\frac{9}{10} - \frac{1}{5} - \frac{2}{7}$$

$$\frac{9}{10} - \frac{1}{5} = \frac{9}{10} - \frac{2}{10} = \frac{7}{10}$$

$$\frac{7}{10} - \frac{2}{7} = \frac{49}{70} - \frac{20}{70} = \frac{29}{70}$$

40) Calculate and fully simplify:

$$\frac{4}{7} \times \frac{1}{3} \div \frac{3}{8}$$

$$\frac{4}{7} \times \frac{1}{3} = \frac{4}{21}$$

$$\frac{4}{21} \div \frac{3}{8} = \frac{4}{21} \times \frac{8}{3} = \frac{32}{63}$$