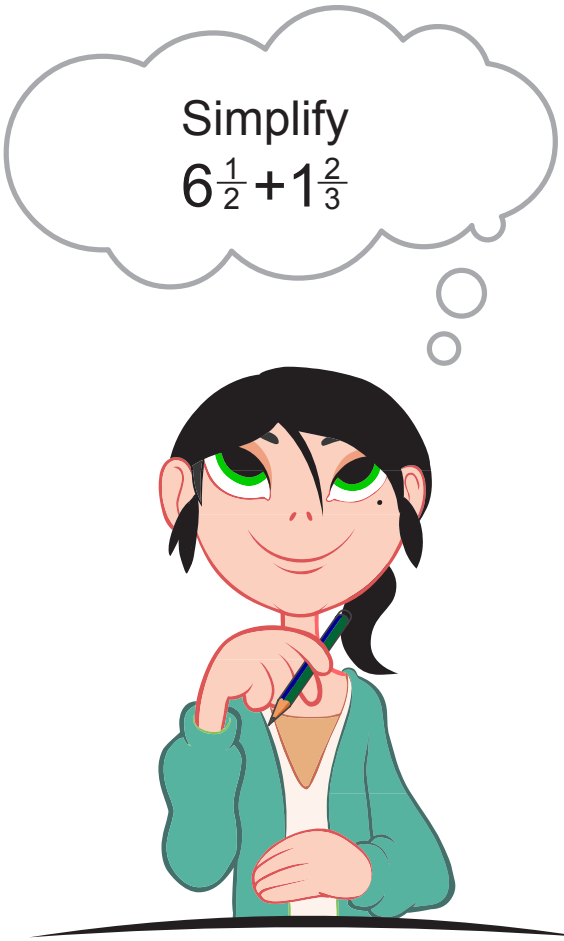
MATHLETICS
Inspiring Better Results

Fractions

Student Book - Series H-2



Mathletics Instant Workbooks

Fractions
Student Book - Series H 2

Contents

Author of The Topics and Topic Tests: AS Kalra

Fractions

Topic 1: Equivalent fractions

QUESTION **1** Complete the following to make equivalent fractions.

a $\frac{1}{2} = \frac{3}{\_\_\_}$ **b** $\frac{1}{3} = \frac{4}{\_\_\_}$ **c** $\frac{1}{4} = \frac{5}{\_\_\_}$ **d** $\frac{1}{5} = \frac{6}{\_\_\_}$

e $\frac{2}{3} = \frac{6}{\_\_\_}$ **f** $\frac{2}{5} = \frac{10}{\_\_\_}$ **g** $\frac{2}{7} = \frac{8}{\_\_\_}$ **h** $\frac{2}{9} = \frac{14}{\_\_\_}$

i $\frac{3}{10} = \frac{9}{\_\_\_}$ **j** $\frac{3}{11} = \frac{\_\_\_}{22}$ **k** $\frac{3}{14} = \frac{\_\_\_}{42}$ **l** $\frac{3}{16} = \frac{15}{\_\_\_}$

QUESTION **2** Find the missing number to complete the sentence.

a $\frac{10}{30} = \frac{\_\_\_}{3}$ **b** $\frac{12}{48} = \frac{1}{\_\_\_}$ **c** $\frac{5}{35} = \frac{1}{\_\_\_}$ **d** $\frac{8}{72} = \frac{1}{\_\_\_}$

e $\frac{18}{54} = \frac{1}{\_\_\_}$ **f** $\frac{12}{36} = \frac{3}{\_\_\_}$ **g** $\frac{4}{9} = \frac{28}{\_\_\_}$ **h** $\frac{3}{6} = \frac{15}{\_\_\_}$

i $\frac{4}{7} = \frac{36}{\_\_\_}$ **j** $\frac{2}{11} = \frac{14}{\_\_\_}$ **k** $\frac{3}{5} = \frac{27}{\_\_\_}$ **l** $\frac{4}{13} = \frac{\_\_\_}{52}$

QUESTION **3** Complete these equivalent fractions.

a $\frac{2}{5} = \frac{24}{\_\_\_}$ **b** $\frac{\_\_\_}{96} = \frac{7}{24}$ **c** $\frac{3}{7} = \frac{\_\_\_}{140}$ **d** $\frac{5}{12} = \frac{\_\_\_}{96}$

e $\frac{2}{9} = \frac{30}{\_\_\_}$ **f** $\frac{24}{\_\_\_} = \frac{1}{3}$ **g** $\frac{5}{8} = \frac{\_\_\_}{96}$ **h** $\frac{16}{20} = \frac{4}{\_\_\_}$

i $\frac{3}{7} = \frac{33}{\_\_\_}$ **j** $\frac{5}{12} = \frac{\_\_\_}{120}$ **k** $\frac{2}{5} = \frac{\_\_\_}{80}$ **l** $\frac{24}{36} = \frac{2}{\_\_\_}$

QUESTION **4** Find the value of the letters.

a $\frac{x}{50} = \frac{7}{10}$ _____ **b** $\frac{a}{3} = \frac{9}{6}$ _____ **c** $\frac{b}{7} = \frac{8}{14}$ _____ **d** $\frac{c}{8} = \frac{6}{8}$ _____

e $\frac{3}{5} = \frac{x}{25}$ _____ **f** $\frac{m}{52} = \frac{8}{4}$ _____ **g** $\frac{n}{9} = \frac{7}{3}$ _____ **h** $\frac{p}{12} = \frac{18}{3}$ _____

i $\frac{3}{a} = \frac{6}{18}$ _____ **j** $\frac{5}{7} = \frac{a}{14}$ _____ **k** $\frac{t}{9} = \frac{1}{3}$ _____ **l** $\frac{y}{12} = \frac{5}{6}$ _____

m $\frac{4}{m} = \frac{2}{5}$ _____ **n** $\frac{3}{n} = \frac{6}{10}$ _____ **o** $\frac{8}{a} = \frac{2}{7}$ _____ **p** $\frac{p}{5} = \frac{4}{10}$ _____

Fractions

Topic 2: Simplifying fractions

QUESTION **1** Write the following fractions in simplest form.

a $\frac{8}{12} = \_\_\_\_$ **b** $\frac{12}{64} = \_\_\_\_$ **c** $\frac{10}{150} = \_\_\_\_$ **d** $\frac{25}{75} = \_\_\_\_$

e $\frac{25}{100} = \_\_\_\_$ **f** $\frac{5}{40} = \_\_\_\_$ **g** $\frac{8}{64} = \_\_\_\_$ **h** $\frac{9}{54} = \_\_\_\_$

i $\frac{52}{65} = \_\_\_\_$ **j** $\frac{24}{72} = \_\_\_\_$ **k** $\frac{36}{48} = \_\_\_\_$ **l** $\frac{32}{80} = \_\_\_\_$

QUESTION **2** Write in simplest form.

a $\frac{10}{60} = \_\_\_\_$ **b** $\frac{20}{160} = \_\_\_\_$ **c** $\frac{30}{330} = \_\_\_\_$ **d** $\frac{40}{480} = \_\_\_\_$

e $\frac{8}{96} = \_\_\_\_$ **f** $\frac{10}{130} = \_\_\_\_$ **g** $\frac{12}{144} = \_\_\_\_$ **h** $\frac{14}{112} = \_\_\_\_$

i $\frac{7}{63} = \_\_\_\_$ **j** $\frac{9}{72} = \_\_\_\_$ **k** $\frac{11}{132} = \_\_\_\_$ **l** $\frac{13}{104} = \_\_\_\_$

QUESTION **3** Simplify the following fractions.

a $\frac{24}{216} = \_\_\_\_$ **b** $\frac{32}{96} = \_\_\_\_$ **c** $\frac{48}{240} = \_\_\_\_$ **d** $\frac{54}{324} = \_\_\_\_$

e $\frac{90}{720} = \_\_\_\_$ **f** $\frac{36}{324} = \_\_\_\_$ **g** $\frac{42}{336} = \_\_\_\_$ **h** $\frac{24}{120} = \_\_\_\_$

i $\frac{64}{704} = \_\_\_\_$ **j** $\frac{63}{189} = \_\_\_\_$ **k** $\frac{81}{324} = \_\_\_\_$ **l** $\frac{108}{324} = \_\_\_\_$

QUESTION **4** Write in simplest form, leaving as mixed numbers.

a $3\frac{8}{10} = \_\_\_\_$ **b** $5\frac{6}{30} = \_\_\_\_$ **c** $6\frac{5}{15} = \_\_\_\_$ **d** $8\frac{3}{12} = \_\_\_\_$

e $9\frac{4}{16} = \_\_\_\_$ **f** $7\frac{3}{9} = \_\_\_\_$ **g** $9\frac{14}{16} = \_\_\_\_$ **h** $12\frac{6}{18} = \_\_\_\_$

i $15\frac{8}{24} = \_\_\_\_$ **j** $16\frac{3}{27} = \_\_\_\_$ **k** $4\frac{12}{32} = \_\_\_\_$ **l** $7\frac{8}{12} = \_\_\_\_$

m $16\frac{4}{12} = \_\_\_\_$ **n** $15\frac{16}{24} = \_\_\_\_$ **o** $18\frac{3}{6} = \_\_\_\_$ **p** $5\frac{6}{18} = \_\_\_\_$

Fractions

Topic 3: Proper fractions, improper fractions and mixed numbers

QUESTION **1** Write whether each fraction is proper, improper or a mixed number.

a $2\frac{1}{3}$ _____ **b** $\frac{120}{9}$ _____ **c** $5\frac{1}{20}$ _____ **d** $\frac{9}{10}$ _____

e $\frac{3}{5}$ _____ **f** $\frac{5}{12}$ _____ **g** $\frac{8}{9}$ _____ **h** $\frac{15}{2}$ _____

i $\frac{8}{3}$ _____ **j** $3\frac{2}{5}$ _____ **k** $2\frac{15}{16}$ _____ **l** $\frac{8}{8}$ _____

QUESTION **2** Write each mixed number as an improper fraction.

a $2\frac{1}{5} =$ ____ **b** $8\frac{1}{10} =$ ____ **c** $1\frac{1}{2} =$ ____ **d** $2\frac{1}{4} =$ ____

e $3\frac{2}{5} =$ ____ **f** $9\frac{4}{7} =$ ____ **g** $5\frac{9}{10} =$ ____ **h** $2\frac{8}{9} =$ ____

i $4\frac{5}{6} =$ ____ **j** $6\frac{3}{8} =$ ____ **k** $6\frac{3}{5} =$ ____ **l** $5\frac{7}{10} =$ ____

QUESTION **3** Write each improper fraction as a mixed number.

a $\frac{24}{7} =$ _____ **b** $\frac{8}{3} =$ _____ **c** $\frac{19}{5} =$ _____ **d** $\frac{28}{11} =$ _____

e $\frac{63}{10} =$ _____ **f** $\frac{58}{7} =$ _____ **g** $\frac{93}{15} =$ _____ **h** $\frac{69}{12} =$ _____

i $\frac{53}{16} =$ _____ **j** $\frac{88}{7} =$ _____ **k** $\frac{153}{10} =$ _____ **l** $\frac{98}{9} =$ _____

QUESTION **4** Change these improper fractions to mixed numbers.

a $\frac{28}{5} =$ _____ **b** $\frac{12}{5} =$ _____ **c** $\frac{93}{16} =$ _____ **d** $\frac{38}{7} =$ _____

e $\frac{37}{7} =$ _____ **f** $\frac{64}{10} =$ _____ **g** $\frac{105}{24} =$ _____ **h** $\frac{46}{9} =$ _____

i $\frac{49}{8} =$ _____ **j** $\frac{73}{9} =$ _____ **k** $\frac{115}{20} =$ _____ **l** $\frac{56}{10} =$ _____

m $\frac{53}{9} =$ _____ **n** $\frac{85}{12} =$ _____ **o** $\frac{140}{11} =$ _____ **p** $\frac{68}{7} =$ _____

Fractions

Topic 4: Addition and subtraction of fractions with the same denominator

QUESTION **1** Add or subtract the following fractions.

a $\frac{1}{5}+\frac{2}{5}=$ _____ **b** $\frac{3}{10}+\frac{4}{10}=$ _____ **c** $\frac{1}{9}+\frac{3}{9}=$ _____

d $\frac{2}{8}+\frac{1}{8}=$ _____ **e** $\frac{3}{20}+\frac{4}{20}=$ _____ **f** $\frac{2}{7}+\frac{1}{7}=$ _____

g $\frac{5}{8}-\frac{2}{8}=$ _____ **h** $\frac{7}{13}-\frac{2}{13}=$ _____ **i** $\frac{8}{17}-\frac{5}{17}=$ _____

QUESTION **2** Find these sums.

a $\frac{2}{10}+\frac{5}{10}=$ _____ **b** $\frac{3}{7}+\frac{1}{7}=$ _____ **c** $\frac{5}{8}+\frac{3}{8}=$ _____

d $\frac{9}{24}+\frac{2}{24}=$ _____ **e** $\frac{6}{13}+\frac{1}{13}=$ _____ **f** $\frac{8}{15}+\frac{2}{15}=$ _____

g $\frac{6}{17}+\frac{5}{17}=$ _____ **h** $\frac{12}{35}+\frac{12}{35}=$ _____ **i** $\frac{8}{27}+\frac{2}{27}=$ _____

QUESTION **3** Find these differences.

a $\frac{9}{15}-\frac{7}{15}=$ _____ **b** $\frac{6}{13}-\frac{2}{13}=$ _____ **c** $\frac{8}{25}-\frac{6}{25}=$ _____

d $\frac{9}{38}-\frac{5}{38}=$ _____ **e** $\frac{6}{49}-\frac{3}{49}=$ _____ **f** $\frac{5}{16}-\frac{3}{16}=$ _____

g $\frac{8}{27}-\frac{7}{27}=$ _____ **h** $\frac{5}{38}-\frac{3}{38}=$ _____ **i** $\frac{6}{25}-\frac{3}{25}=$ _____

QUESTION **4** Add or subtract, giving the answers in mixed numbers.

a $\frac{45}{36}-\frac{2}{36}=$ _____ **b** $\frac{8}{10}+\frac{11}{10}=$ _____ **c** $\frac{3}{7}+\frac{9}{7}=$ _____

d $\frac{5}{11}+\frac{9}{11}=$ _____ **e** $\frac{8}{25}+\frac{24}{25}=$ _____ **f** $\frac{23}{12}-\frac{4}{12}=$ _____

g $\frac{49}{15}-\frac{12}{15}=$ _____ **h** $\frac{19}{5}-\frac{12}{5}=$ _____ **i** $\frac{16}{5}-\frac{2}{5}=$ _____

j $\frac{28}{12}-\frac{2}{12}=$ _____ **k** $\frac{361}{200}-\frac{25}{200}=$ _____ **l** $\frac{27}{12}-\frac{7}{12}=$ _____

Fractions

Topic 5: Addition and subtraction of fractions with the different denominators

QUESTION **1** Add or subtract the following fractions.

a $\frac{1}{2}+\frac{1}{4}=$ _____ **b** $\frac{1}{3}+\frac{1}{5}=$ _____ **c** $\frac{1}{8}+\frac{1}{24}=$ _____

d $\frac{3}{4}-\frac{1}{2}=$ _____ **e** $\frac{5}{6}-\frac{2}{3}=$ _____ **f** $\frac{2}{5}-\frac{1}{10}=$ _____

g $\frac{1}{8}+\frac{1}{4}=$ _____ **h** $\frac{3}{4}-\frac{1}{3}=$ _____ **i** $\frac{1}{6}-\frac{1}{12}=$ _____

QUESTION **2** Find these sums and differences.

a $\frac{3}{8}+\frac{2}{5}=$ _____ **b** $\frac{8}{15}+\frac{3}{15}=$ _____ **c** $\frac{5}{9}-\frac{1}{3}=$ _____

d $\frac{6}{7}+\frac{2}{3}=$ _____ **e** $\frac{4}{15}+\frac{1}{5}=$ _____ **f** $\frac{3}{4}+\frac{2}{5}=$ _____

g $\frac{7}{9}+\frac{5}{7}=$ _____ **h** $\frac{4}{5}+\frac{6}{7}=$ _____ **i** $\frac{3}{7}+\frac{2}{9}=$ _____

QUESTION **3** Find the value of the following.

a $\frac{8}{15}+\frac{2}{3}=$ _____ **b** $\frac{5}{6}-\frac{3}{4}=$ _____ **c** $\frac{6}{7}-\frac{2}{21}=$ _____

d $\frac{3}{20}+\frac{7}{50}=$ _____ **e** $\frac{3}{25}-\frac{1}{5}=$ _____ **f** $\frac{3}{8}+\frac{5}{24}=$ _____

g $\frac{8}{12}+\frac{3}{24}=$ _____ **h** $\frac{93}{100}-\frac{2}{5}=$ _____ **i** $\frac{2}{3}+\frac{3}{4}=$ _____

QUESTION **4** Evaluate the following.

a $\frac{6}{7}-\frac{5}{6}=$ _____ **b** $\frac{18}{21}-\frac{3}{7}=$ _____ **c** $\frac{2}{7}+\frac{3}{14}=$ _____

d $\frac{3}{4}-\frac{1}{8}=$ _____ **e** $\frac{5}{6}-\frac{2}{18}=$ _____ **f** $\frac{1}{3}-\frac{1}{7}=$ _____

g $\frac{8}{9}-\frac{2}{3}=$ _____ **h** $\frac{11}{25}+\frac{1}{5}=$ _____ **i** $\frac{8}{15}-\frac{2}{5}=$ _____

j $\frac{7}{10}-\frac{2}{5}=$ _____ **k** $\frac{9}{10}-\frac{2}{5}=$ _____ **l** $\frac{9}{10}-\frac{3}{5}=$ _____

Fractions

Topic 6: Multiplication of fractions

QUESTION **1** Multiply the following fractions.

a $\frac{1}{3} \times \frac{1}{3} =$ _____ **b** $\frac{2}{5} \times \frac{2}{5} =$ _____ **c** $\frac{3}{7} \times \frac{3}{7} =$ _____

d $\frac{1}{5} \times \frac{1}{15} =$ _____ **e** $\frac{3}{4} \times \frac{4}{5} =$ _____ **f** $\frac{5}{6} \times \frac{6}{7} =$ _____

g $\frac{1}{12} \times \frac{1}{12} =$ _____ **h** $\frac{3}{25} \times \frac{1}{4} =$ _____ **i** $\frac{1}{5} \times \frac{3}{7} =$ _____

QUESTION **2** Multiply these fractions.

a $\frac{1}{5} \times \frac{2}{9} =$ _____ **b** $\frac{3}{7} \times \frac{4}{8} =$ _____ **c** $\frac{5}{9} \times \frac{6}{7} =$ _____

d $\frac{1}{3} \times \frac{5}{7} =$ _____ **e** $\frac{6}{8} \times \frac{2}{3} =$ _____ **f** $\frac{3}{4} \times \frac{5}{9} =$ _____

g $\frac{9}{10} \times \frac{11}{10} =$ _____ **h** $\frac{9}{11} \times \frac{10}{11} =$ _____ **i** $\frac{3}{4} \times \frac{9}{11} =$ _____

QUESTION **3** Work out the answers, as basic fractions, for the following.

a $\frac{9}{20} \times \frac{3}{5} =$ _____ **b** $\frac{2}{3} \times \frac{15}{16} =$ _____ **c** $\frac{3}{4} \times \frac{9}{11} =$ _____

d $\frac{2}{3}$ of $\frac{8}{9} =$ _____ **e** $\frac{3}{4}$ of $\frac{16}{21} =$ _____ **f** $\frac{2}{5}$ of $\frac{25}{36} =$ _____

g $\frac{5}{6} \times \frac{18}{20} =$ _____ **h** $\frac{1}{5} \times \frac{15}{16} =$ _____ **i** $\frac{3}{7} \times \frac{21}{24} =$ _____

j $\frac{3}{10} \times \frac{20}{33} =$ _____ **k** $\frac{5}{6} \times \frac{18}{19} =$ _____ **l** $\frac{3}{7} \times \frac{21}{26} =$ _____

QUESTION **4** Simplify the following.

a $\frac{2}{3} \times 6 =$ _____ **b** $\frac{4}{9} \times 27 =$ _____ **c** $\frac{5}{6} \times 36 =$ _____

d $\frac{8}{9} \times 54 =$ _____ **e** $\frac{7}{10} \times 100 =$ _____ **f** $\frac{5}{8} \times 72 =$ _____

g $\frac{1}{5} \times 125 =$ _____ **h** $\frac{1}{4} \times 48 =$ _____ **i** $\frac{3}{7} \times 343 =$ _____

j $\frac{4}{5} \times 200 =$ _____ **k** $\frac{6}{13} \times 169 =$ _____ **l** $\frac{8}{9} \times 729 =$ _____

Fractions

Topic 7: Division of fractions

QUESTION **1** Divide the following fractions.

a $\frac{2}{5} \div \frac{1}{5} =$ _____ **b** $\frac{3}{7} \div \frac{3}{14} =$ _____ **c** $\frac{9}{10} \div \frac{3}{10} =$ _____

d $\frac{3}{4} \div \frac{1}{4} =$ _____ **e** $\frac{8}{9} \div \frac{2}{3} =$ _____ **f** $\frac{7}{8} \div \frac{3}{8} =$ _____

g $\frac{7}{8} \div \frac{3}{4} =$ _____ **h** $\frac{6}{15} \div \frac{3}{5} =$ _____ **i** $\frac{21}{100} \div \frac{7}{100} =$ _____

QUESTION **2** Find the answers to these divisions.

a $\frac{5}{6} \div \frac{3}{12} =$ _____ **b** $\frac{2}{9} \div \frac{9}{14} =$ _____ **c** $\frac{9}{10} \div \frac{3}{5} =$ _____

d $\frac{4}{5} \div \frac{3}{10} =$ _____ **e** $\frac{7}{100} \div \frac{3}{20} =$ _____ **f** $\frac{11}{100} \div \frac{33}{200} =$ _____

g $\frac{8}{15} \div \frac{2}{15} =$ _____ **h** $\frac{8}{27} \div \frac{4}{9} =$ _____ **i** $\frac{3}{8} \div \frac{9}{4} =$ _____

QUESTION **3** Work out the answers, as basic fractions, to the following.

a $\frac{5}{6} \div \frac{10}{18} =$ _____ **b** $\frac{7}{10} \div \frac{90}{100} =$ _____ **c** $\frac{16}{27} \div \frac{8}{54} =$ _____

d $\frac{3}{8} \div \frac{9}{16} =$ _____ **e** $\frac{15}{28} \div \frac{25}{42} =$ _____ **f** $\frac{18}{35} \div \frac{20}{49} =$ _____

g $\frac{5}{9} \div \frac{10}{18} =$ _____ **h** $\frac{8}{13} \div \frac{24}{39} =$ _____ **i** $\frac{16}{23} \div \frac{8}{46} =$ _____

j $\frac{8}{15} \div \frac{24}{25} =$ _____ **k** $\frac{9}{25} \div \frac{18}{50} =$ _____ **l** $\frac{48}{49} \div \frac{16}{7} =$ _____

QUESTION **4** Evaluate the following.

a $25 \div \frac{5}{9} =$ _____ **b** $26 \div \frac{13}{14} =$ _____ **c** $\frac{8}{36} \div 16 =$ _____

d $18 \div \frac{9}{7} =$ _____ **e** $\frac{4}{9} \div \frac{28}{27} =$ _____ **f** $28 \div \frac{56}{60} =$ _____

g $\frac{3}{4} \div \frac{12}{8} =$ _____ **h** $15 \div \frac{21}{10} =$ _____ **i** $96 \div \frac{16}{25} =$ _____

j $\frac{15}{38} \div \frac{30}{19} =$ _____ **k** $\frac{9}{15} \div \frac{3}{5} =$ _____ **l** $\frac{9}{14} \div \frac{27}{28} =$ _____

Fractions

Topic 8: Finding a fraction of a number

QUESTION **1** Work out the answers to the following.

a $\frac{1}{2}$ of \$50 = _____ **b** $\frac{3}{5}$ of \$800 = _____ **c** $\frac{1}{10}$ of 20 hours = _____

d $\frac{1}{3}$ of 1 hour = _____ **e** $\frac{2}{5}$ of 1 tonne = _____ **f** $\frac{3}{5}$ of 400 = _____

g $\frac{9}{10}$ of 5 hours = _____ **h** $\frac{3}{5}$ of 480 = _____ **i** $\frac{3}{4}$ of 1 metre = _____

QUESTION **2** Find the following.

a $\frac{7}{10}$ of 300 = _____ **b** $\frac{2}{5}$ of 40 = _____ **c** $\frac{3}{5}$ of 80 = _____

d $\frac{4}{9}$ of 8100 = _____ **e** $\frac{5}{12}$ of 6 weeks = _____ **f** $\frac{5}{13}$ of 169 = _____

g $\frac{7}{8}$ of 1600 = _____ **h** $\frac{8}{15}$ of \$9000 = _____ **i** $\frac{1}{16}$ of 960 = _____

QUESTION **3** Work out the following.

a $\frac{1}{4}$ of \$464 = _____ **b** $\frac{1}{2}$ of 60 = _____ **c** $\frac{1}{3}$ of 39 = _____

d $\frac{2}{3}$ of 525 = _____ **e** $\frac{3}{4}$ of 500 = _____ **f** $\frac{3}{5}$ of 625 = _____

g $\frac{5}{6}$ of \$216 = _____ **h** $\frac{5}{8}$ of \$512 = _____ **i** $\frac{9}{16}$ of 256 = _____

j $\frac{8}{15}$ of 360 = _____ **k** $\frac{9}{100}$ of 10000 = _____ **l** $\frac{5}{7}$ of 343 = _____

QUESTION **4** Evaluate the following.

a $\frac{3}{4}$ of \$200 = _____ **b** $\frac{3}{5}$ of 10 kg = _____ **c** $\frac{1}{3}$ of 60 years = _____

d $\frac{2}{5}$ of 120 minutes = _____ **e** $\frac{1}{8}$ of 24 hours = _____ **f** $\frac{2}{3}$ of \$375 = _____

g $\frac{4}{7}$ of 42 weeks = _____ **h** $\frac{3}{7}$ of 1540 = _____ **i** $\frac{3}{5}$ of 10 metres = _____

j $\frac{7}{25}$ of 1 century = _____ **k** $\frac{5}{8}$ of \$256 = _____ **l** $\frac{5}{6}$ of 180 days = _____

Fractions

Topic 9: Fractions with mixed numbers

QUESTION **1** Simplify the following.

a $3+2\frac{1}{4}=$ _____ **b** $1\frac{3}{5}+2\frac{1}{4}=$ _____ **c** $8\frac{1}{2}+1\frac{3}{4}=$ _____

d $5\frac{1}{10}+2=$ _____ **e** $5\frac{1}{2}+3\frac{1}{4}=$ _____ **f** $5\frac{3}{10}+1\frac{2}{3}=$ _____

g $4\frac{1}{6}+2\frac{1}{3}=$ _____ **h** $8\frac{3}{4}+1\frac{1}{5}=$ _____ **i** $4\frac{8}{15}+1\frac{2}{5}=$ _____

QUESTION **2** Work out the following.

a $6\frac{3}{4}-2=$ _____ **b** $8\frac{5}{6}-4=$ _____ **c** $6\frac{7}{10}-2\frac{2}{5}=$ _____

d $8\frac{3}{8}-2\frac{5}{6}=$ _____ **e** $6\frac{1}{2}-2\frac{3}{4}=$ _____ **f** $5\frac{7}{9}-2\frac{2}{3}=$ _____

g $9\frac{3}{10}-6\frac{2}{5}=$ _____ **h** $10\frac{2}{5}-8\frac{1}{3}=$ _____ **i** $5\frac{4}{5}-2\frac{2}{3}=$ _____

QUESTION **3** Find the following.

a $1\frac{1}{2}\times\frac{2}{3}=$ _____ **b** $4\frac{1}{2}\times5\frac{1}{3}=$ _____ **c** $8\frac{1}{4}\times2\frac{1}{2}=$ _____

d $\frac{6}{7}\times2\frac{2}{5}=$ _____ **e** $1\frac{1}{3}\times2\frac{3}{5}=$ _____ **f** $5\frac{3}{8}\times2\frac{1}{4}=$ _____

g $2\frac{3}{8}\times3\frac{1}{4}=$ _____ **h** $5\frac{3}{9}\times2\frac{1}{2}=$ _____ **i** $1\frac{1}{2}\times2\frac{1}{2}=$ _____

j $1\frac{2}{3}\times3\frac{1}{2}=$ _____ **k** $2\frac{2}{3}\times1\frac{1}{4}=$ _____ **l** $5\frac{1}{2}\times3\frac{1}{4}=$ _____

QUESTION **4** Evaluate the following.

a $2\frac{3}{5}\ \ \frac{3}{4}=$ _____ **b** $3\frac{1}{2}\ \ \frac{1}{3}=$ _____ **c** $5\frac{3}{4}\ \ \frac{1}{5}=$ _____

d $2\frac{3}{4}\ \ 1\frac{1}{2}=$ _____ **e** $5\frac{3}{8}\ \ 4\frac{1}{2}=$ _____ **f** $8\frac{1}{2}\ \ 2\frac{1}{4}=$ _____

g $12\frac{1}{2}\ \ 1\frac{3}{4}=$ _____ **h** $8\frac{3}{5}\ \ 2\frac{1}{10}=$ _____ **i** $5\frac{3}{5}\ \ 1\frac{1}{2}=$ _____

j $8\frac{1}{4}\ \ 1\frac{1}{4}=$ _____ **k** $9\frac{3}{4}\ \ 1\frac{1}{3}=$ _____ **l** $12\frac{1}{2}\ \ 3\frac{1}{2}=$ _____

Fractions

Topic 10: Problem solving with fractions

1 Find the sum of $\frac{3}{5}$, $\frac{3}{8}$ and $\frac{3}{10}$. _____

2 Divide the sum of $\frac{8}{9}$ and $\frac{7}{10}$ by $\frac{1}{4}$. _____

3 Subtract the difference of $\frac{1}{3}$ and $\frac{1}{4}$ from the sum of $\frac{1}{3}$ and $\frac{1}{4}$. _____

4 What fraction is 80 cm of 4 m? _____

5 How many sixths are in 5? _____

6 A shool year consists of 40 weeks. At the end of week 32, what fraction of the school year is over?

_____

7 A class has 16 girls and 12 boys. What fraction of the class is girls?

_____

8 Find the difference between $30\frac{5}{6}$ and $8\frac{1}{2}$ and multiply this result by $3\frac{1}{4}$.

_____

9 A square has a side of $2\frac{3}{4}$ cm. Find its area. _____

10 In a school of 1200 students, $\frac{5}{8}$ are girls. How many students are girls?

_____

11 If $\frac{3}{4}$ of a cake is shared equally among 6 people, what fraction of the cake would each receive?

_____

12 A car tank when $\frac{2}{3}$ full contains 48 litres. What is the capacity of the tank?

_____

13 A rectangle has length $3\frac{1}{2}$ cm and width $2\frac{1}{4}$ cm. Find the perimeter of the rectangle.

_____

14 An aeroplane flew 1600 km in $2\frac{1}{4}$ hours. What was its average speed?

_____

15 How many pieces of wood, each $1\frac{1}{4}$ metres long, can be cut from a board $12\frac{1}{2}$ metres long?

_____

Fractions

Topic Test — PART A

Instructions This part consists of 12 multiple-choice questions
Each question is worth 1 mark
Fill in only ONE CIRCLE for each question
Calculators are NOT allowed

Time allowed: 15 minutes **Total marks = 12**

					Marks
1	$9+\frac{9}{10}$ equals				
	Ⓐ $9\frac{3}{10}$	Ⓑ $9\frac{9}{10}$	Ⓒ $9\frac{1}{10}$	Ⓓ $\frac{90}{10}$	1
2	$1-\frac{60}{1000}$ equals				
	Ⓐ $\frac{1060}{1000}$	Ⓑ $\frac{900}{1000}$	Ⓒ $\frac{47}{50}$	Ⓓ $\frac{49}{50}$	1
3	$\frac{1}{9}\times\frac{1}{9}$ equals				
	Ⓐ $\frac{1}{81}$	Ⓑ $\frac{1}{9}$	Ⓒ $\frac{2}{9}$	Ⓓ none of these	1
4	$4\frac{1}{4}+2\frac{1}{2}$ equals				
	Ⓐ $5\frac{1}{4}$	Ⓑ $6\frac{3}{4}$	Ⓒ $5\frac{5}{8}$	Ⓓ $7\frac{3}{4}$	1
5	$18\times\frac{5}{6}$ equals				
	Ⓐ 25	Ⓑ 10	Ⓒ 15	Ⓓ $21\frac{3}{5}$	1
6	$\frac{4}{5}+\frac{5}{4}$ equals				
	Ⓐ $2\frac{1}{2}$	Ⓑ $1\frac{3}{5}$	Ⓒ $2\frac{3}{5}$	Ⓓ $2\frac{1}{20}$	1
7	$2\frac{1}{3}-1\frac{1}{2}$ equals				
	Ⓐ $\frac{5}{6}$	Ⓑ $\frac{1}{6}$	Ⓒ $1\frac{1}{6}$	Ⓓ $1\frac{1}{3}$	1

Topic Test

PART A continued

Marks

8 $\frac{4}{13}$ of 26 equals

Ⓐ 4 Ⓑ 6 Ⓒ 8 Ⓓ 10 — 1

9 $4\frac{2}{5} + 1\frac{1}{4}$ equals

Ⓐ $3\frac{7}{20}$ Ⓑ $5\frac{13}{20}$ Ⓒ $6\frac{9}{20}$ Ⓓ $7\frac{11}{20}$ — 1

10 $\frac{1}{4} + \frac{1}{10}$ equals

Ⓐ $\frac{3}{40}$ Ⓑ $\frac{1}{20}$ Ⓒ $\frac{7}{20}$ Ⓓ $\frac{9}{20}$ — 1

11 $\dfrac{\frac{3}{4} + \frac{2}{4}}{\frac{5}{4}} =$

Ⓐ $\frac{3}{4}$ Ⓑ $\frac{5}{4}$ Ⓒ 1 Ⓓ 2 — 1

12 Which of the following numbers is the largest?

Ⓐ $\frac{3}{4}$ Ⓑ $\frac{4}{5}$ Ⓒ $\frac{3}{7}$ Ⓓ $\frac{6}{10}$ — 1

13 $\frac{3}{5}$ of a number is 6. What is the number?

Ⓐ 8 Ⓑ 10 Ⓒ 12 Ⓓ 18 — 1

14 $\frac{5}{8} \times \frac{24}{25}$ equals

Ⓐ $\frac{15}{200}$ Ⓑ $\frac{24}{200}$ Ⓒ $\frac{2}{5}$ Ⓓ $\frac{3}{5}$ — 1

15 $\dfrac{6}{1 - \frac{5}{6}}$ equals

Ⓐ 12 Ⓑ 18 Ⓒ 24 Ⓓ 36 — 1

Total marks achieved for PART A 15

Fractions

Topic Test — PART B

Instructions This part consists of 15 questions
Each question is worth 1 mark
Write answers in the answers-only column

Time allowed: 20 minutes **Total marks = 15**

	Questions	Answers only	Marks
1	$\frac{9}{16} = \frac{\quad}{96}$		1
2	Simplify $\frac{36}{216}$		1
3	Simplify $9\frac{3}{9}$, leaving the answer as a mixed number.		1
4	Write $8\frac{3}{5}$ as an improper fraction.		1
5	Write $\frac{58}{7}$ as a mixed number.		1
6	$\frac{7}{20} + \frac{3}{20} =$		1
7	$\frac{43}{90} - \frac{12}{90} =$		1
8	$\frac{5}{6} + \frac{7}{9} =$		1
9	$\frac{9}{16} - \frac{1}{4} =$		1
10	$\frac{8}{9} \times \frac{12}{9} =$		1
11	$\frac{15}{28} \times \frac{7}{25} =$		1
12	$\frac{8}{27} \quad \frac{16}{36} =$		1
13	$42 \quad \frac{7}{9} =$		1
14	$\left[\frac{32}{45} \quad \frac{16}{9}\right] \quad \frac{5}{6} =$		1
15	$8\frac{2}{3} \times \frac{5}{13} =$		1

Total marks achieved for PART B $\frac{\quad}{15}$

Fractions

Topic Test — PART C

Instructions This part consists of 4 questions
Each question is worth 5 marks
Show all necessary

Time allowed: 20 minutes **Total marks = 20**

Questions **Marks**

1 Complete the equivalent fractions.

a $\frac{5}{8} = \frac{\quad}{64}$ **b** $\frac{3}{20} = \frac{9}{\quad}$ **c** $\frac{4}{5} = \frac{\quad}{125}$

d $\frac{\quad}{30} = \frac{40}{150}$ **e** $\frac{5}{\quad} = \frac{60}{36}$ **5**

2 Write the following fractions in simplest form.

a $\frac{120}{340} = \_\_\_\_$ **b** $\frac{88}{121} = \_\_\_\_$ **c** $\frac{125}{625} = \_\_\_\_$

d $\frac{70}{98} = \_\_\_\_$ **e** $\frac{85}{100} = \_\_\_\_$ **5**

3 Simplify the following fractions.

a $\frac{9}{44} - \frac{5}{44} =$ _____ **b** $\frac{9}{25} + \frac{6}{125} =$ _____ **c** $\frac{12}{45} \times \frac{4}{300} =$ _____

d $\frac{8}{35} \quad \frac{72}{14} =$ _____ **e** $\frac{10}{15} \times \frac{25}{200} =$ _____ **5**

4 Work out the following.

a $\frac{7}{9}$ of \$63 = _____ **b** $\frac{7}{50}$ of 200 km = _____ **c** $8\frac{3}{4} + 9\frac{2}{5} =$ _____

d $3\frac{5}{6} \quad 2\frac{1}{2} =$ _____ **e** $15\frac{1}{2} - 13\frac{3}{4} =$ _____ **5**

Total marks achieved for PART C 20