

Simplify  $6\frac{1}{2}+1\frac{2}{3}$ 



Mathletics Instant Workbooks



# Fractions Student Book - Series H

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#### **Topic 1: Equivalent fractions**

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

**a** 
$$\frac{1}{2} = \frac{1}{4}$$

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

$$c = \frac{1}{5} = \frac{1}{10}$$

**d** 
$$\frac{1}{10} = \frac{1}{100}$$

$$e \frac{7}{10} = \frac{7}{50}$$

$$f = \frac{1}{5} = \frac{1}{100}$$

$$\mathbf{g} = \frac{3}{5} = \frac{3}{40}$$

**h** 
$$\frac{3}{4} = \frac{3}{16}$$

$$i \frac{2}{7} = \frac{21}{21}$$

$$\mathbf{j} = \frac{3}{8} = \frac{3}{64}$$

$$k = \frac{5}{6} = \frac{34}{24}$$

$$1 \frac{4}{7} = \frac{35}{35}$$

$$\mathbf{m} = \frac{7}{8} = \frac{74}{24}$$

$$n = \frac{2}{9} = \frac{81}{81}$$

$$o \frac{3}{4} = \frac{3}{20}$$

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

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

**a** 
$$\frac{5}{20} = \frac{}{4}$$

**b** 
$$\frac{18}{36} = \frac{1}{1}$$

$$c = \frac{8}{20} = \frac{4}{}$$

**d** 
$$\frac{16}{20} = \frac{4}{}$$

$$e \frac{14}{20} = \frac{1}{10}$$

$$\mathbf{f} = \frac{1}{4} = \frac{1}{100}$$

$$g \frac{6}{14} = \frac{3}{14}$$

$$h \frac{12}{36} = \frac{1}{}$$

$$i \frac{5}{9} = \frac{30}{}$$

$$\mathbf{j} = \frac{3}{8} = \frac{24}{3}$$

$$k = \frac{2}{9} = \frac{2}{90}$$

$$1 \frac{3}{7} = \frac{30}{1}$$

 $\label{eq:QUESTION 3} \textbf{Complete these equivalent fractions.}$ 

**a** 
$$\frac{3}{4} = \frac{3}{64}$$

**b** 
$$\frac{6}{96} = \frac{6}{24}$$

$$c = \frac{7}{9} = \frac{28}{}$$

**d** 
$$\frac{4}{5} = \frac{4}{250}$$

$$e \frac{16}{20} = \frac{16}{80}$$

$$f = \frac{12}{8}$$

$$g = \frac{7}{8} = \frac{64}{64}$$

**h** 
$$\frac{15}{20} = \frac{3}{10}$$

### Topic 2: Simplifying fractions

Write the following fractions in simplest form. QUESTION 1



**b** 
$$\frac{30}{50} =$$

$$c = \frac{80}{100} =$$

**d** 
$$\frac{10}{25} =$$

$$e \frac{4}{32} = --$$

$$f = \frac{8}{12} = --$$

$$g \frac{12}{36} = --$$

**h** 
$$\frac{24}{48} = ---$$

$$i \frac{6}{32} = --$$

$$\mathbf{j} = \frac{9}{81} = --$$

$$k = \frac{8}{56} = --$$

$$1 \frac{32}{48} = --$$

QUESTION **2** Write in simplest form.

a 
$$\frac{104}{200} =$$
 **b**  $\frac{136}{512} =$  **c**  $\frac{38}{57} =$ 

**b** 
$$\frac{136}{512} = -----$$

$$c \frac{38}{57} = ----$$

$$\frac{46}{48} =$$

$$e \frac{27}{36} = \frac{32}{44} = \frac{32}{44}$$

$$\mathbf{f} = \frac{32}{44} = \dots$$

$$\mathbf{g} = \frac{88}{99} =$$

$$h \frac{16}{64} =$$

$$i \frac{36}{84} = ----$$

$$\mathbf{j} = \frac{20}{84} = \frac{1}{20}$$

$$k \frac{38}{58} = ----$$

$$i \frac{36}{84} = \frac{36}{84} = \frac{38}{58} = \frac{1}{625} = \frac{25}{625} = \frac{1}{625} = \frac{1}{625$$

$$m = \frac{49}{147} =$$
 $n = \frac{60}{75} =$ 

$$\mathbf{n} \quad \frac{60}{75} =$$

$$\mathbf{o} \quad \frac{70}{84} =$$

$$\mathbf{p} = \frac{16}{128} = ----$$

QUESTION **3** Write in simplest form, leaving as mixed numbers.

**a** 
$$2\frac{6}{8} = 1$$

**b** 
$$5\frac{8}{16} =$$

**a** 
$$2\frac{6}{8} = \frac{1}{16} = \frac{1}{$$

**d** 
$$4\frac{5}{30} =$$

$$e \ 3\frac{4}{16} =$$

**e** 
$$3\frac{4}{16} =$$
 **f**  $7\frac{10}{20} =$  **g**  $5\frac{8}{12} =$  **h**  $8\frac{3}{12} =$ 

$$\mathbf{g} \quad 5\frac{8}{12} = \underline{\hspace{1cm}}$$

**h** 
$$8\frac{3}{12} =$$

#### Topic 3: Proper fractions, improper fractions and mixed numbers

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



**b** 
$$\frac{5}{6}$$
 \_\_\_\_\_

$$c = \frac{41}{35}$$

**d** 
$$\frac{2}{9}$$



**f** 
$$1\frac{1}{2}$$

**g** 
$$5\frac{1}{4}$$

**h** 
$$9\frac{2}{3}$$

$$i = \frac{17}{6}$$

$$k = \frac{41}{5}$$

$$1 \frac{11}{13}$$

$$\mathbf{m} = \frac{2}{5}$$

$$\mathbf{o} = 6\frac{3}{4}$$

$$\frac{18}{4}$$

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

**a** 
$$1\frac{2}{5} = ----$$

**b** 
$$3\frac{5}{8} =$$
 **c**  $7\frac{8}{9} =$ 

$$c 7\frac{8}{9} =$$

**d** 
$$2\frac{5}{6} =$$

$$e 10\frac{1}{2} = ----$$

$$\mathbf{f} = 21\frac{2}{3} = ----$$

$$\mathbf{g} \quad 5\frac{3}{4} = ----$$

**h** 
$$8\frac{1}{5} =$$

i 
$$30\frac{2}{3} = ----$$

$$\mathbf{j} \quad 10\frac{3}{11} = ----$$

$$k 7\frac{1}{7} = ----$$

$$1 \quad 1\frac{9}{10} = ----$$

$$\mathbf{m} \quad 5\frac{1}{6} = ----$$

**n** 
$$30\frac{1}{7} = ----$$

$$\mathbf{o} \quad 2\frac{7}{9} = ----$$

$$\mathbf{p} \quad 5\frac{1}{7} = ----$$

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

**a** 
$$\frac{10}{7} =$$
 \_\_\_\_\_\_

**b** 
$$\frac{5}{2}$$
 = \_\_\_\_\_

$$c \frac{7}{3} =$$
\_\_\_\_\_

**d** 
$$\frac{9}{4}$$
 = \_\_\_\_\_\_

$$e \frac{20}{13} =$$
\_\_\_\_\_

$$f = \frac{35}{2} =$$

$$\mathbf{f} = \frac{35}{2} = \mathbf{g} = \frac{84}{9} = \frac{1}{2}$$

$$h \frac{36}{7} =$$

$$i \frac{41}{8} =$$

$$\mathbf{j} = \frac{49}{5} =$$

$$k = \frac{63}{8} =$$

$$1 \frac{52}{7} =$$

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

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



**b** 
$$\frac{1}{5} + \frac{2}{5} =$$
 \_\_\_\_\_

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

 $\mathbf{d} \quad \frac{3}{20} + \frac{4}{20} = \underline{\hspace{1cm}}$ 

$$e \frac{1}{8} + \frac{1}{8} =$$

$$\mathbf{f} \quad \frac{5}{7} - \frac{1}{7} = \underline{\phantom{0}}$$

 $g = \frac{2}{9} + \frac{5}{9} =$ 

$$h \frac{3}{7} + \frac{2}{7} =$$

$$i \frac{5}{9} + \frac{2}{9} =$$
\_\_\_\_\_

$$\mathbf{j} = \frac{8}{11} - \frac{6}{11} =$$

$$k \frac{5}{22} - \frac{3}{22} =$$

$$1 \frac{2}{9} - \frac{1}{9} =$$

$$\mathbf{m} \quad \frac{7}{12} - \frac{3}{12} = \underline{\hspace{1cm}}$$

$$n \frac{8}{33} + \frac{4}{33}$$

$$\mathbf{o} \quad \frac{5}{9} - \frac{2}{9} = \underline{\hspace{1cm}}$$

QUESTION **2** Add or subtract the following fractions, giving answers as mixed numbers.

$$\mathbf{a} = \frac{4}{10} + \frac{7}{10} =$$

**b** 
$$\frac{3}{4} + \frac{3}{4} =$$

$$c \frac{4}{5} + \frac{3}{5} =$$

$$\mathbf{d} \quad \frac{17}{20} + \frac{8}{20} = \qquad \qquad \mathbf{e} \quad \frac{19}{10} - \frac{3}{10} = \qquad \qquad \mathbf{f} \quad \frac{45}{38} - \frac{1}{38} =$$

$$e^{-\frac{19}{10}-\frac{3}{10}}=$$

$$\mathbf{f} \quad \frac{45}{38} - \frac{1}{38} = \underline{\hspace{1cm}}$$

$$\mathbf{g} \quad \frac{6}{5} + \frac{8}{5} = \qquad \qquad \mathbf{h} \quad \frac{13}{10} - \frac{2}{10} = \qquad \qquad \mathbf{i} \quad \frac{48}{20} - \frac{21}{20} = \qquad \qquad \mathbf{i}$$

$$\mathbf{h} \quad \frac{13}{10} - \frac{2}{10} =$$

$$i \frac{48}{20} - \frac{21}{20} =$$

$$\mathbf{j} \quad \frac{17}{3} - \frac{10}{3} =$$

$$k \frac{15}{7} - \frac{4}{7} =$$

$$1 \quad \frac{27}{10} - \frac{12}{10} =$$

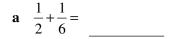
$$\mathbf{m} \quad \frac{251}{100} - \frac{50}{100} = \underline{\hspace{1cm}}$$

$$\mathbf{n} \quad \frac{1361}{1000} - \frac{261}{1000} = \qquad \qquad \mathbf{o} \quad \frac{18}{11} - \frac{5}{11} =$$

$$\mathbf{o} \quad \frac{18}{11} - \frac{5}{11} = \underline{\phantom{0}}$$

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

QUESTION **1** Work out the addition or subtraction of the following fractions.



**b** 
$$\frac{1}{4} + \frac{1}{20} =$$
 \_\_\_\_\_

$$c \frac{1}{5} + \frac{3}{4} =$$

**d** 
$$\frac{1}{2} - \frac{1}{4} =$$
 \_\_\_\_\_

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

$$\mathbf{f} \quad \frac{2}{3} - \frac{1}{6} = \underline{\phantom{0}}$$

$$\mathbf{g} \quad \frac{1}{2} + \frac{1}{3} = \underline{\hspace{1cm}}$$

$$\mathbf{h} \quad \frac{1}{3} + \frac{1}{4} = \underline{\hspace{1cm}}$$

$$i \frac{1}{5} + \frac{1}{7} =$$
 \_\_\_\_\_

$$\mathbf{j} \quad \frac{1}{3} - \frac{1}{4} =$$

$$\mathbf{k} \quad \frac{1}{5} - \frac{1}{12} = \underline{\phantom{a}}$$

$$1 \quad \frac{1}{4} - \frac{1}{8} =$$

QUESTION **2** Find the value of:

$$\mathbf{a} \quad \frac{7}{10} + \frac{2}{5} = \underline{\hspace{1cm}}$$

**b** 
$$\frac{3}{5} + \frac{7}{15} =$$
 \_\_\_\_\_

$$c \frac{1}{2} + \frac{3}{5} =$$
\_\_\_\_\_

**d** 
$$\frac{3}{4} - \frac{1}{3} =$$
 \_\_\_\_\_

$$e \frac{3}{4} - \frac{1}{2} =$$

$$f = \frac{8}{15} + \frac{3}{5} =$$

$$\mathbf{g} \quad \frac{2}{3} + \frac{3}{4} = \underline{\hspace{1cm}}$$

$$\mathbf{h} = \frac{3}{4} + \frac{4}{5} =$$

$$i \frac{4}{5} + \frac{5}{6} =$$
\_\_\_\_\_

$$\mathbf{j} \quad \frac{3}{4} + \frac{1}{2} =$$

$$\mathbf{k} \quad \frac{3}{4} + \frac{1}{3} =$$

$$1 \frac{3}{4} + \frac{1}{5} =$$

QUESTION **3** Evaluate:

$$a \frac{3}{5} - \frac{3}{10} =$$
\_\_\_\_\_

**b** 
$$\frac{3}{4} - \frac{7}{20} =$$
 \_\_\_\_\_

$$c \frac{1}{3} - \frac{1}{5} =$$

**d** 
$$\frac{93}{100} - \frac{3}{4} =$$

$$\mathbf{e} \quad \frac{81}{100} - \frac{3}{4} = \underline{\qquad \qquad \mathbf{f} \quad \frac{11}{20} - \frac{7}{20} = \underline{\qquad \qquad }}$$

$$\mathbf{f} = \frac{11}{20} - \frac{7}{20} =$$

$$\mathbf{g} \quad \frac{7}{18} - \frac{1}{3} = \underline{\phantom{a}}$$

$$\mathbf{h} \quad \frac{5}{6} + \frac{1}{12} = \underline{\hspace{1cm}}$$

$$i \frac{7}{36} - \frac{1}{12} =$$

## **Topic 6: Multiplication of fractions**

QUESTION **1** Multiply the following fractions.

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

**b** 
$$\frac{1}{3} \frac{1}{4} =$$

$$\mathbf{c} \quad \frac{1}{4} \quad \frac{1}{7} = \underline{\phantom{a}}$$

**d** 
$$\frac{1}{10}$$
  $\frac{1}{10} =$ 

$$e \frac{3}{10} \frac{11}{10} =$$

$$\mathbf{f} = \frac{7}{10} = \frac{3}{10} = \frac{1}{10}$$

$$\mathbf{g} \quad \frac{9}{10} \quad \frac{3}{10} = \underline{\hspace{1cm}}$$

**h** 
$$\frac{3}{100}$$
  $\frac{1}{10}$  =

$$i \frac{9}{10} \frac{3}{200} =$$

$$\mathbf{j} \quad \frac{1}{4} \quad \frac{1}{5} =$$

$$\mathbf{k} \quad \frac{1}{4} \quad \frac{1}{9} =$$

$$1 \quad \frac{1}{4} \quad \frac{5}{6} =$$

QUESTION 2 Work out the answers to the following as basic fractions.

$$a \frac{9}{10} \frac{5}{9} =$$
\_\_\_\_\_

**b** 
$$\frac{1}{2} \frac{4}{5} =$$
 \_\_\_\_\_

$$c \frac{2}{3} \frac{9}{13} =$$

**d** 
$$\frac{1}{3}$$
 of  $\frac{6}{7} =$  \_\_\_\_\_

$$e \frac{1}{4} \text{ of } \frac{4}{15} = \underline{\hspace{1cm}}$$

**f** 
$$\frac{2}{3}$$
 of  $\frac{6}{7}$  = \_\_\_\_\_

$$\mathbf{g} \quad \frac{4}{5} \quad \frac{7}{8} =$$

$$h \frac{1}{2} \frac{2}{5} =$$

$$\mathbf{h} \quad \frac{1}{2} \quad \frac{2}{5} = \qquad \qquad \mathbf{i} \quad \frac{6}{15} \quad \frac{7}{12} = \qquad \qquad$$

QUESTION **3** Simplify the following.

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

**b** 
$$\frac{3}{4}$$
 4=

$$c = \frac{5}{6} = 6 =$$

**d** 
$$\frac{2}{3} \frac{1}{2} =$$
 \_\_\_\_\_

$$e \frac{12}{13} 13 =$$

$$f = \frac{5}{7} = 7 =$$

$$\mathbf{g} = \frac{7}{10} = 10 =$$

**h** 
$$\frac{5}{4}$$
 24 =

$$i \frac{8}{9} 63 =$$

$$\mathbf{j} = \frac{12}{20} = 40 =$$

$$k = \frac{6}{15} = 90 =$$

$$1 \frac{24}{36} 12 =$$

## **Topic 7: Division of fractions**

QUESTION **1** Divide the following fractions.

**a** 
$$\frac{2}{3} \frac{1}{3} =$$
 **b**  $\frac{3}{5} \frac{2}{5} =$  **c**  $\frac{7}{20} \frac{8}{20} =$  \_\_\_\_\_

$$\mathbf{b} = \frac{3}{5} = \frac{2}{5} =$$

$$\mathbf{c} \quad \frac{7}{20} \quad \frac{8}{20} =$$

**d** 
$$\frac{11}{10} \frac{3}{10} =$$
 **e**  $\frac{7}{10} \frac{1}{2} =$  **f**  $\frac{3}{100} \frac{1}{20} =$ 

$$e \frac{7}{10} \frac{1}{2} =$$

$$\mathbf{f} = \frac{3}{100} = \frac{1}{20} = \frac{1}{100}$$

$$\mathbf{g} = \frac{3}{4} = \frac{1}{2} = \frac{1}{2}$$

$$\mathbf{g} \quad \frac{3}{4} \quad \frac{1}{2} =$$
 $\mathbf{h} \quad \frac{3}{2} \quad \frac{3}{4} =$ 
 $\mathbf{i} \quad \frac{2}{9} \quad \frac{9}{10} =$ 

$$i \frac{2}{9} \frac{9}{10} =$$
\_\_\_\_\_

$$\mathbf{j} = \frac{5}{6} = \frac{5}{12} =$$

$$\mathbf{k} = \frac{4}{5} = \frac{4}{10} = \frac{1}{10}$$

$$\mathbf{j} \quad \frac{5}{6} \quad \frac{5}{12} = \underline{\qquad} \qquad \mathbf{k} \quad \frac{4}{5} \quad \frac{4}{10} = \underline{\qquad} \qquad \mathbf{l} \quad \frac{5}{7} \quad \frac{15}{28} = \underline{\qquad}$$

QUESTION **2** Work out the answers to the following as basic fractions.

**a** 
$$\frac{3}{4} \frac{1}{10} =$$
 **b**  $\frac{2}{5} \frac{3}{20} =$  **c**  $\frac{5}{6} \frac{7}{24} =$  \_\_\_\_\_

**b** 
$$\frac{2}{5}$$
  $\frac{3}{20}$  =

$$c \frac{5}{6} \frac{7}{24} =$$

**d** 
$$\frac{1}{2} \frac{1}{6} =$$

**d** 
$$\frac{1}{2} \frac{1}{6} =$$
 **e**  $\frac{7}{10} \frac{3}{28} =$  **f**  $\frac{5}{10} \frac{3}{100} =$ 

$$\mathbf{f} = \frac{5}{10} = \frac{3}{100} =$$

$$\mathbf{g} \quad \frac{5}{6} \quad \frac{7}{18} = \underline{\qquad} \qquad \mathbf{h} \quad \frac{3}{4} \quad \frac{5}{32} = \underline{\qquad} \qquad \mathbf{i} \quad \frac{2}{5} \quad \frac{3}{25} = \underline{\qquad}$$

$$h \frac{3}{4} \frac{5}{32} =$$

$$i \frac{2}{5} \frac{3}{25} =$$

QUESTION **3** Evaluate the following.

**a** 8 
$$\frac{4}{5}$$
 =

**b** 16 
$$\frac{2}{3}$$
 =

**a** 
$$8 \frac{4}{5} =$$
 **b**  $16 \frac{2}{3} =$  **c**  $\frac{8}{9} 4 =$ 

**d** 
$$\frac{3}{5}$$
 3 = **e**  $\frac{7}{15}$  14 = **f** 63  $\frac{7}{9}$  = \_\_\_\_\_

$$e \frac{7}{15} 14 =$$
\_\_\_\_\_

**f** 63 
$$\frac{7}{9}$$
 =

**g** 14 
$$\frac{7}{2}$$
 =

**g** 14 
$$\frac{7}{2}$$
 = **h** 81  $\frac{9}{16}$  = **i** 72  $\frac{9}{4}$  =

i 72 
$$\frac{9}{4}$$
 = \_\_\_\_\_

## Topic 8: Finding a fraction of a number

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

$$a \frac{1}{3} \text{ of } $27 =$$

**b** 
$$\frac{3}{4}$$
 of \$400=

$$\mathbf{c} = \frac{1}{5} \text{ of } 10 \text{ hours} = \underline{\phantom{a}}$$

**d** 
$$\frac{2}{3}$$
 of 1 hour =

$$e \frac{3}{5}$$
 of 1 tonne=

$$f = \frac{3}{5}$$
 of 200 grams =

$$\mathbf{g} = \frac{7}{10}$$
 of 2 hours=

$$h = \frac{2}{5}$$
 of 1 year =

$$i \frac{2}{5}$$
 of 1 metre =

$$\mathbf{j} = \frac{3}{5} \text{ of } \$75 =$$

$$k \frac{3}{8} \text{ of } \$64 =$$

$$1 \quad \frac{1}{5} \text{ of 1 kg} = \underline{\qquad}$$

QUESTION **2** Find the following.

**a** 
$$\frac{1}{2}$$
 of 62=

**b** 
$$\frac{1}{5}$$
 of 120=

$$c = \frac{4}{5} \text{ of } $175 =$$

**d** 
$$\frac{19}{100}$$
 of  $700 =$ 

$$e \frac{5}{12}$$
 of 120=

$$f = \frac{1}{16}$$
 of 480=

$$g = \frac{5}{16} \text{ of } 80 =$$

$$\mathbf{h} \quad \frac{1}{8} \text{ of 1 day} =$$

$$\mathbf{i} \quad \frac{1}{4} \text{ of } 60 \text{ minutes} =$$

QUESTION **3** Work out the following.

**a** 
$$\frac{3}{4}$$
 of \$88=

**b** 
$$\frac{3}{5}$$
 of 240=

$$c = \frac{2}{7} \text{ of } 770 =$$

**d** 
$$\frac{2}{5}$$
 of 55=

$$e \frac{3}{5} \text{ of } 600 =$$

$$f = \frac{1}{3} \text{ of } 270 =$$

$$\mathbf{g} = \frac{7}{100}$$
 of 1 century=

$$\mathbf{h} = \frac{1}{4}$$
 of 52 weeks =

$$i \frac{2}{5}$$
 of  $2 \text{ km} =$ 

### Topic 9: Fractions with mixed numbers

QUESTION **1** Simplify the following.

**a** 
$$3\frac{1}{2} + 5 =$$
 \_\_\_\_\_

**b** 
$$6+2\frac{1}{4}=$$

$$c \quad 2+3\frac{1}{5} =$$

**d** 
$$2\frac{3}{4} + \frac{1}{2} =$$

$$e \quad 5\frac{1}{2} + 2\frac{1}{2} =$$

$$\mathbf{f} \quad 3\frac{1}{4} + \frac{3}{4} = \underline{\hspace{1cm}}$$

**g** 
$$2\frac{3}{5}$$

$$\mathbf{g} \quad 2\frac{3}{5} + \frac{1}{2} = \underline{\phantom{a}}$$

**h** 
$$7-3\frac{4}{5}=$$

$$i \quad 14\frac{1}{2} - 7 =$$

j 
$$7\frac{2}{5}$$

$$\mathbf{j} \quad 7\frac{2}{5} - 4 =$$

$$1 \quad 9\frac{3}{10} - 4\frac{3}{10} =$$

QUESTION **2** Work out the following.

**a** 
$$5\frac{1}{2} - \frac{3}{4} =$$
 \_\_\_\_\_

**b** 
$$5\frac{3}{8} - 2\frac{3}{4} =$$

c 
$$12\frac{3}{10} - 5\frac{2}{3} =$$

**d** 
$$4\frac{7}{8} \times 4 =$$

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

$$\mathbf{f} \quad 3\frac{7}{8} \times 1\frac{1}{2} =$$
\_\_\_\_\_

$$\mathbf{g} \quad 3\frac{1}{7} \times 6\frac{1}{5} =$$

**h** 
$$2\frac{1}{2} \times 3\frac{1}{2} =$$

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

QUESTION **3** Find the following.

$$\mathbf{a} \quad 6\frac{3}{5} \div \frac{2}{5} =$$

**a** 
$$6\frac{3}{5} \div \frac{2}{5} =$$

**b** 
$$4\frac{2}{5} \div \frac{7}{8} =$$

$$c \quad 3\frac{3}{8} \div 2\frac{3}{4} =$$

**d** 
$$20\frac{1}{2} \div 3\frac{1}{2} =$$

$$e \quad 5\frac{1}{2} \div 2\frac{1}{2} =$$

$$\mathbf{f} \quad 3\frac{3}{4} \div 1\frac{1}{4} =$$

$$\mathbf{g} \quad 2\frac{3}{5} \div 1\frac{1}{5} =$$

**h** 
$$5\frac{5}{8} \div 1\frac{1}{4} =$$

$$\mathbf{i} \quad 3\frac{1}{2} \div 3\frac{1}{2} =$$

### **Topic 10: Problem solving with fractions**

1 Find the sum of  $\frac{2}{5}$ ,  $\frac{3}{4}$  and  $\frac{1}{10}$ 



- 2 Divide the sum of  $\frac{7}{8}$  and  $\frac{3}{10}$  by  $\frac{1}{2}$
- 3 Subtract the difference between  $\frac{1}{2}$  and  $\frac{1}{3}$  from the sum of  $\frac{1}{2}$  and  $\frac{1}{3}$

- 4 In a school of 800 students,  $\frac{1}{5}$  of the students have brown eyes. How many do not have brown eyes?
- 5 If  $\frac{2}{3}$  of a cake is shared equally among four people, what fraction of the cake would each receive?
- **6** Find the difference between  $20\frac{3}{4}$  and  $9\frac{1}{2}$  and multiply this by  $2\frac{1}{3}$
- 7 A rectangle has length  $3\frac{1}{4}$  cm and width  $1\frac{3}{4}$  cm. Find the perimeter of the rectangle.
- **8** A car tank when  $\frac{3}{4}$  full contains 45 litres. What is the capacity of the tank?
- **9** Alka bought  $3\frac{2}{5}$  kg of apples on one day and  $4\frac{3}{4}$  kg the next day. How many kilograms of apples did she buy in all?
- **10** An aeroplane flew 1200 km in  $2\frac{3}{4}$  hours. What was its average speed?
- **11** How many pieces of wood each  $1\frac{1}{3}$  metres long can be cut from a board 8 metres long?
- **12** A square has side length  $5\frac{3}{4}$  cm. Find its area.
- **13** Hari works for  $3\frac{1}{2}$  hours on Saturday and  $5\frac{2}{5}$  hours on Sunday. Find the total number of hours he works.

#### **Unit 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

 $7 + \frac{7}{10}$  equals

**B** 
$$7\frac{7}{10}$$

$$^{\circ}$$
  $7\frac{1}{10}$ 

$$\bigcirc \qquad \frac{107}{10}$$

Marks

1

 $1 - \frac{80}{1000}$  equals

$$\frac{}{1000}$$

$$\bigcirc$$
  $\frac{23}{25}$ 

of 35 + 16 equals

$$\stackrel{\circ}{\mathbf{A}}$$
 21

 $\frac{1}{2} + \frac{1}{3}$  equals

$$(A) \frac{1}{5}$$

$$\bigcirc B \qquad \frac{5}{6}$$

$$\bigcirc$$
  $\frac{1}{6}$ 

The value of  $\frac{1}{2} + \frac{3}{4} + \frac{5}{6}$ (A)  $2\frac{1}{12}$ 

$$\bigcirc$$
 2 $\frac{7}{12}$ 

 $\frac{3}{4} + \frac{4}{3}$  equals

$$\bigcirc$$

$$\bigcirc \frac{12}{7}$$

Two-thirds of a number is equal to 8; the number is

$$(\mathbf{B})^{1}$$
 24

$$(\widehat{\mathbf{C}})$$
 12

$$(\mathbf{\overline{D}})$$
 40

 $\frac{4 \times 8 \times 15 \times 10}{5} \text{ equals}$  $2\times6\times5$ 

$$(C)$$
 60

 $\frac{5}{1-\frac{4}{5}} \text{ equals}$ 

$$(\mathbf{A})$$
 15

**10** Which of the following numbers is the largest?

$$\bigcirc$$
  $\frac{2}{7}$ 

$$\bigcirc$$
  $\frac{7}{10}$ 

**11**  $\frac{3}{7} \times \frac{21}{15}$  equals

$$\bigcirc$$
  $\frac{24}{105}$ 

$$\bigcirc$$
  $\frac{3}{5}$ 

**12**  $4\frac{2}{5} + 1\frac{1}{4}$  equals

$$(\mathbf{A}) \quad 3\frac{7}{20}$$

**B** 
$$5\frac{13}{20}$$

$$\bigcirc 6\frac{9}{20}$$

**(D)** 
$$7\frac{11}{20}$$

#### Total marks achieved for PART A

Unit 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 $\frac{7}{8} = \frac{7}{56}$		1
1 $\frac{7}{8} = \frac{7}{56}$ 2 Simplify $\frac{9}{12}$		1
3 Simplify $7\frac{8}{12}$ , leaving as a mixed number.		1
4 Write $4\frac{7}{9}$ as an improper fraction.		1
5 Write $\frac{37}{4}$ as a mixed number.		1
<b>6</b> Add $\frac{3}{10} + \frac{4}{10}$		1
7 Subtract $\frac{39}{70} - \frac{9}{70}$		1
<b>8</b> Work out $\frac{2}{3} + \frac{5}{7}$		1
9 Find $\frac{8}{9} - \frac{1}{2}$		1
Evaluate the following: 10 $\frac{3}{7} \times \frac{5}{7} =$		1
<b>11</b> $\frac{8}{21} \times \frac{7}{16} =$		1
<b>12</b> $\frac{5}{27} \div \frac{4}{9} =$		1
<b>13</b> $15 \div \frac{2}{5} =$ (8 3) 4		1
<b>14</b> $\left(\frac{8}{25} \div \frac{3}{5}\right) \div \frac{4}{5} =$ <b>15</b> $5\frac{5}{7} \times \frac{3}{20} =$		1
<b>15</b> $3\frac{7}{7} \times \frac{1}{20}$		1