

UNIT 10 Arithmetic: Fractions

Mental Tests

M 10.1 Standard Route (*no calculator*)

Pupils will need a copy of Fraction Sheet A

1. What fraction has been shaded in diagram:

(i) A, $(\frac{2}{3})$

(ii) B, $(\frac{4}{5})$

(iii) C ? $(\frac{3}{7})$

2. What fraction of shape B is *not* shaded? $(\frac{1}{5})$

3. What is $\frac{1}{2}$ of 18? (9)

4. A car park contains 12 spaces. There are 5 cars in the car park.

(a) What fraction of the car park is *full*? $(\frac{5}{12})$

(b) What fraction of the car park is *empty*? $(\frac{7}{12})$

5. Write these fractions in the simplest possible form:

(a) $\frac{4}{8}$, $(\frac{1}{2})$

(b) $\frac{9}{12}$ $(\frac{3}{4})$

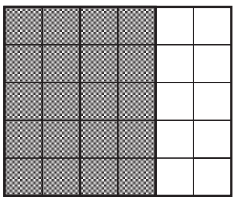
6. What is $\frac{1}{3}$ of 24? (8)

Mental Tests

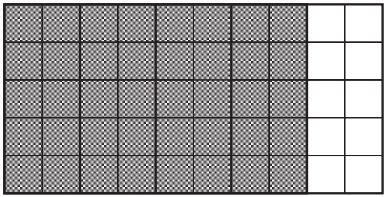
M 10.1 Standard Route

Fraction Sheet A

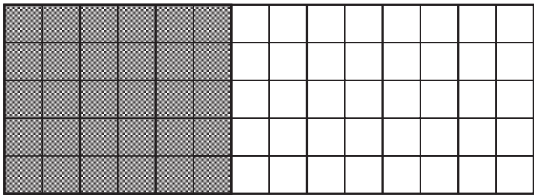
A



B



C



UNIT 10 Arithmetic: Fractions

Mental Tests

M 10.2 Standard Route *(no calculator)*

Pupils will need a copy of Fraction Sheet B

1. What fraction has been shaded in diagram:

(i) A, $(\frac{3}{4})$

(ii) B, $(\frac{5}{9})$

(iii) C ? $(\frac{7}{8})$

2. What fraction of shape B is *not* shaded? $(\frac{4}{9})$

3. What is $\frac{1}{4}$ of 20? (5)

4. What is $\frac{1}{3}$ of 18? (6)

5. Write these fractions in the simplest possible form:

(a) $\frac{6}{8}$, $(\frac{3}{4})$

(b) $\frac{5}{15}$ $(\frac{1}{3})$

6. There are 6 red sweets and 5 blue sweets in a bag. What fraction of these sweets are:

(a) red, $(\frac{6}{11})$

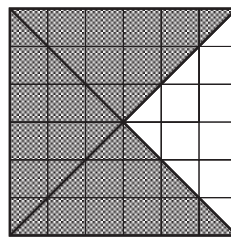
(b) blue? $(\frac{5}{11})$

Mental Tests

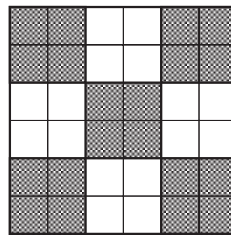
M 10.2 Standard Route

Fraction Sheet B

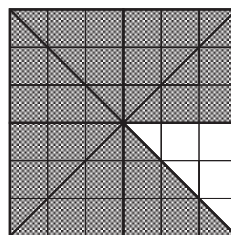
A



B



C



UNIT 10 Arithmetic: Fractions

Mental Tests

M 10.3 Academic Route *(no calculator)*

Pupils will need a copy of Fraction Sheet C

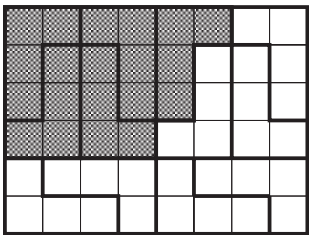
1. What fraction of shape A has been shaded? $(\frac{5}{12})$
2. What fraction of shape B has *not* been shaded? $(\frac{9}{16})$
3. Diagram C illustrates a mixed number.
 - (a) What is the mixed number? $(3\frac{5}{6})$
 - (b) Write the mixed number as an improper fraction. $(\frac{23}{6})$
4. What is $\frac{2}{3}$ of 24? (16)
5. What is $\frac{3}{5}$ of 45? (27)
6. Write these fractions in the simplest possible form:
 - (a) $\frac{10}{15}$ $(\frac{2}{3})$
 - (b) $\frac{10}{24}$ $(\frac{5}{12})$
7. Write $\frac{11}{3}$ as a mixed number. $(3\frac{2}{3})$
8. Write $3\frac{4}{5}$ as an improper fraction. $(\frac{19}{5})$

Mental Tests

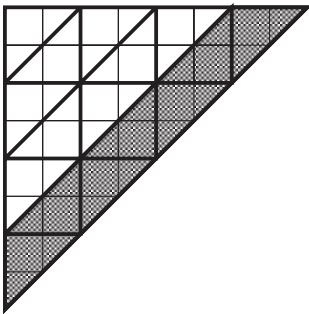
M 10.3 Academic Route

Fraction Sheet C

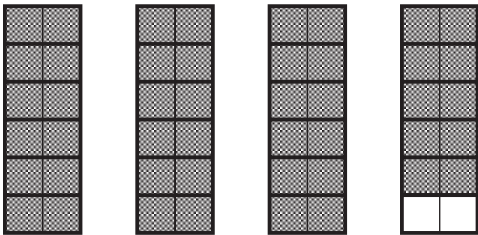
A



B



C



UNIT 10 Arithmetic: Fractions

Mental Tests

M 10.4 Express Route (*no calculator*)

1. Write these fractions in their simplest form:

(a) $\frac{10}{15}$ ($\frac{2}{3}$)

(b) $\frac{21}{28}$ ($\frac{3}{4}$)

(c) $\frac{9}{24}$ ($\frac{3}{8}$)

2. What is $\frac{4}{7}$ of 49? (28)

3. What is $\frac{5}{8}$ of 48? (30)

4. Write these fractions as mixed numbers:

(a) $\frac{11}{7}$ ($1\frac{4}{7}$)

(b) $\frac{22}{5}$ ($4\frac{2}{5}$)

5. Write $3\frac{4}{7}$ as an improper fraction. ($\frac{25}{7}$)

6. Which of these fractions is the *smaller*:

$\frac{1}{8}$ or $\frac{1}{9}$? ($\frac{1}{9}$)

7. Which of these fractions is the *larger*:

$\frac{3}{7}$ or $\frac{3}{8}$? ($\frac{3}{7}$)