Chapter 10

Fractions

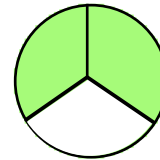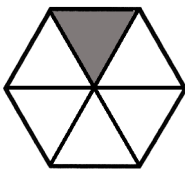## Exercise 1

1. a   What fraction of this shape is shaded ?

    b   What fraction of the shape is **NOT** shaded ?
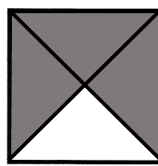
2. What fraction of each shape is shaded ?
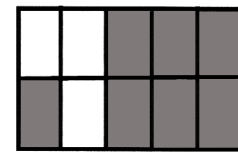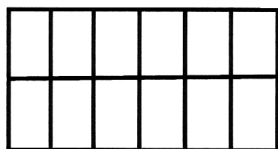
    a   b   c

3. What fraction of each shape in question 2 is **NOT** shaded ?

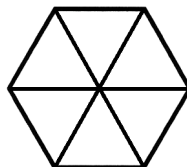4. Copy or trace each shape and shade or colour the fraction shown :–

    a   b   c
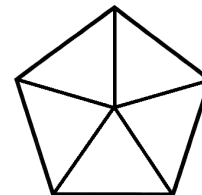
    shade $\frac{7}{12}$ shade $\frac{5}{6}$ shade $\frac{2}{5}$

5. In a car park there were 5 cars, 4 vans and 2 buses.

    a   How many cars, vans and buses were there altogether ?

    b   What fraction of them were cars ?

    c   What fraction were buses ?

6. Cheryl keeps 5 DVD's, 3 CD's and 4 videos in a box.

    a   What fraction of the box are DVD's ?

    b   What fraction of the box are **NOT** videos ?
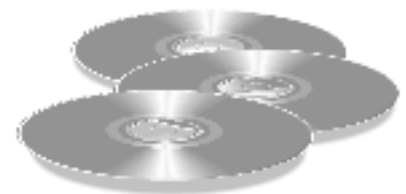
7. Last July it rained for 5 days.

    How many days are there in July and what **fraction** of the month was it raining ?

Exercise 2

1. Look at the two pictures opposite.

    a What fraction of each shape is shaded ?

    b What can you tell about these 2 fractions from the pictures ?

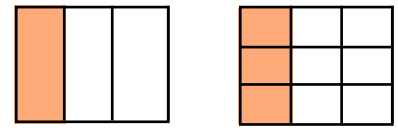**2.** Simplify each fraction by dividing top and bottom by 2 :-

    a $\frac{2}{4}$ **b** $\frac{6}{10}$ **c** $\frac{8}{14}$ **d** $\frac{20}{26}$ **e** $\frac{18}{22}$ **f** $\frac{12}{14}$

3. Simplify each fraction by dividing top and bottom by 5 :-

    a $\frac{5}{10}$ **b** $\frac{5}{30}$ **c** $\frac{10}{25}$ **d** $\frac{15}{20}$ **e** $\frac{25}{35}$ **f** $\frac{30}{40}$

4. Simplify each fraction as far as possible :-

    a $\frac{15}{25}$ **b** $\frac{4}{10}$ **c** $\frac{9}{15}$ **d** $\frac{30}{50}$ **e** $\frac{20}{30}$ **f** $\frac{12}{15}$

    g $\frac{18}{21}$ **h** $\frac{16}{20}$ **i** $\frac{14}{21}$ **j** $\frac{3}{15}$ **k** $\frac{8}{12}$

    l $\frac{6}{18}$

5. Ravi had 50p. He spent 30p on a drink.

    a What fraction of his money did he spend ?

    b Simplify your answer.

6. A case of twelve bottles is used at a party. The case had :-

    • 6 bottles of cola,
    • 3 bottles of lemonade,
    • 1 bottle of orange
    • the rest was water.

    a What fraction of the case was cola ?

    b What fraction of the case was lemonade ?

Exercise 3

1. **Copy** and complete :-

   $\frac{1}{3}$ of 15p means ─> " 15p **divided** by 3 = ...p ".

2. Find :-

   a $\frac{1}{3}$ of 24 kg   b $\frac{1}{2}$ of £18   c $\frac{1}{4}$ of 36 g

   d $\frac{1}{5}$ of 45 litres   e $\frac{1}{6}$ of 24p   f $\frac{1}{7}$ of 56 cm

3. At a party, $\frac{1}{4}$ of the 28 guests were girls.

   a How many girls were at the party ?

   b How many boys were at the party ?

4. a Amy is $\frac{1}{6}$ of her dad's age.

      If her dad is 42 years old, how old is Amy ?

   b Zak tired $\frac{1}{5}$ of the way into a 20 kilometre run.

      How many kilometres had Zak run before tiring ?

   c An eighth of the sweets in a bag of 40 sweets are red.

      How many of the sweets in the bag are **NOT** red ?

5. Ben spent $\frac{1}{4}$ of his pocket money on sweets.

   If Ben received £2 pocket money, how much did he spend on sweets ?

6. There were 24 birds in my garden.

   • $\frac{1}{4}$ of them were starlings

   • $\frac{1}{3}$ of them were blackbirds

   • $\frac{1}{6}$ of them were thrushes.
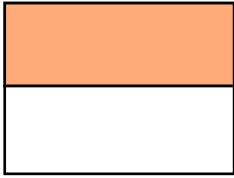
   • The rest were sparrows.

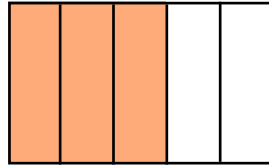   How many of each type of bird were there ?

Revision Exercise

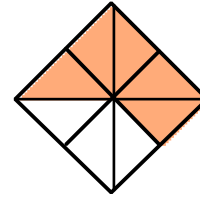1. Write down the fraction of each shape that is **shaded** :–
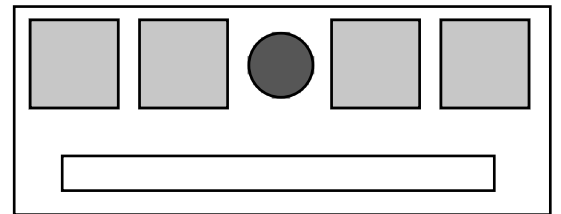
    a   b   c

2. Write down the fraction of each shape in question 2 that is **NOT** shaded.

3. A diagram is made using 4 squares,
    2 rectangles and a circle.

    What fraction of the shapes are :–

    a squares   b rectangles   c circles ?

4. Write down a fraction that is equivalent to $\frac{3}{4}$.

5. Simplify :–

    a $\frac{2}{4}$ b $\frac{3}{12}$ c $\frac{5}{30}$ d $\frac{12}{16}$ e $\frac{15}{25}$ f $\frac{30}{70}$

6. Find :–

    a $\frac{1}{3}$ of 27 kg   b $\frac{1}{5}$ of 45p   c $\frac{1}{6}$ of 36 ml

    d $\frac{1}{7}$ of £35   e $\frac{1}{8}$ of 56 euros   f $\frac{1}{10}$ of 320 mm.

7. Kate cycled for $\frac{1}{3}$ of an hour.
    How many minutes did Kate cycle for ?

8. I am 28 years old.

    I lived the first $\frac{1}{4}$ of my life in Edinburgh.

    For how many years did I live in Edinburgh ?