

- (b) By dividing the top line and bottom line of each fraction by 4, simplify each one:-
- (i)  $\frac{8}{12}$  (ii)  $\frac{12}{16}$  (iii)  $\frac{4}{20}$  (iv)  $\frac{20}{24}$  (v)  $\frac{28}{32}$  (vi)  $\frac{16}{28}$
- (c) By dividing the top line and bottom line of each fraction by 5, simplify each one:-
- (i)  $\frac{5}{15}$  (ii)  $\frac{10}{25}$  (iii)  $\frac{45}{80}$  (iv)  $\frac{35}{50}$  (v)  $\frac{45}{55}$  (vi)  $\frac{10}{15}$

8. For each of the following fractions, divide the numerator and the denominator by a number to simplify the fraction :-

- (a)  $\frac{9}{12} \div 3$  (b)  $\frac{5}{25}$  (c)  $\frac{7}{21}$  (d)  $\frac{8}{24}$  (e)  $\frac{12}{30}$
- (f)  $\frac{28}{35}$  (g)  $\frac{9}{15}$  (h)  $\frac{7}{35}$  (i)  $\frac{12}{36}$  (j)  $\frac{70}{100}$
- (k)  $\frac{8}{12}$  (l)  $\frac{20}{32}$  (m)  $\frac{50}{75}$  (n)  $\frac{10}{35}$  (o)  $\frac{25}{105}$
- (p)  $\frac{12}{16}$  (q)  $\frac{35}{56}$  (r)  $\frac{27}{36}$  (s)  $\frac{33}{55}$  (t)  $\frac{80}{100}$

**Fractions of a quantity**

To find  $\frac{1}{4}$  of 12, you simply divide 12 by 4  
 $\Rightarrow \frac{1}{4}$  of 12 =  $(12 \div 4) = 3$

To find  $\frac{1}{5}$  of 20, you simply divide 20 by 5  
 $\Rightarrow \frac{1}{5}$  of 20 =  $(20 \div 5) = 4$

To find  $\frac{1}{10}$  of 90, you simply divide 90 by 10  
 $\Rightarrow \frac{1}{10}$  of 90 =  $(90 \div 10) = 9$

**Exercise 2**

1. Find :-

- (a)  $\frac{1}{2}$  of 22 (b)  $\frac{1}{4}$  of 16 (c)  $\frac{1}{3}$  of 18
- (d)  $\frac{1}{5}$  of 50 (e)  $\frac{1}{10}$  of 90 (f)  $\frac{1}{6}$  of 120
- (g)  $\frac{1}{8}$  of 160 (h)  $\frac{1}{100}$  of 700 (i)  $\frac{1}{20}$  of 60
- (j)  $\frac{1}{7}$  of 49 (k)  $\frac{1}{4}$  of 52 (l)  $\frac{1}{25}$  of 200

2. Find :-

- (a)  $\frac{1}{3}$  of 156 (b)  $\frac{1}{4}$  of 368 (c)  $\frac{1}{5}$  of 315
- (d)  $\frac{1}{6}$  of 1920 (e)  $\frac{1}{7}$  of 1680 (f)  $\frac{1}{20}$  of 820
- (g)  $\frac{1}{15}$  of 4500 (h)  $\frac{1}{11}$  of 1221 (i)  $\frac{1}{30}$  of 690



To find  $\frac{3}{4}$  of a number (like 24), you do it using 2 steps.

Step 1 :- Find  $\frac{1}{4}$  of 24 first ( $\div 4$ )  $\Rightarrow \frac{1}{4}$  of 24 =  $24 \div 4 = 6$

Step 2 :- Now find  $\frac{3}{4}$  of 24 by ( $\times 3$ )  $\Rightarrow \frac{3}{4}$  of 24 =  $6 \times 3 = 18$

Set the working down as follows :-

$\frac{3}{4}$  of 24  $\Rightarrow (24 \div 4) \Rightarrow 6 \times 3 = 18$

$\frac{2}{3}$  of 21  $\Rightarrow (21 \div 3) \Rightarrow 7 \times 2 = 14$

$\frac{5}{8}$  of 16  $\Rightarrow (16 \div 8) \Rightarrow 2 \times 5 = 10$

**Rule :-**

To multiply by a fraction like  $\frac{5}{6}$   
 $\Rightarrow$  "divide by the denominator" (6)  
 $\Rightarrow$  then "multiply by the numerator" (5)

3. Without using a calculator do the following :-

- (a)  $\frac{2}{3}$  of 18 =  $(18 \div 3) \Rightarrow 6 \times 2 = \dots$
- (b)  $\frac{3}{5}$  of 30 =  $(30 \div \dots) \Rightarrow \dots \times 3 = \dots$
- (c)  $\frac{2}{3}$  of 15 (d)  $\frac{3}{4}$  of 32 (e)  $\frac{2}{5}$  of 25
- (f)  $\frac{5}{8}$  of 24 (g)  $\frac{7}{10}$  of 60 (h)  $\frac{5}{9}$  of 27
- (i)  $\frac{4}{7}$  of 35 (j)  $\frac{3}{8}$  of 32 (k)  $\frac{9}{10}$  of 60
- (l)  $\frac{7}{100}$  of 300 (m)  $\frac{7}{10}$  of 30 (n)  $\frac{7}{8}$  of 160

4. Do the following :-

- (a)  $\frac{4}{5}$  of 120 =  $(120 \div 5) \Rightarrow 24 \times 4 = \dots$
- (b)  $\frac{3}{8}$  of 400 =  $(400 \div ?) \Rightarrow ? \times 3 = ??$
- (c)  $\frac{3}{4}$  of 120 (d)  $\frac{2}{3}$  of 360 (e)  $\frac{9}{10}$  of 1300
- (f)  $\frac{2}{7}$  of 85 (g)  $\frac{7}{9}$  of 360 (h)  $\frac{3}{8}$  of 256
- (i)  $\frac{4}{7}$  of 630 (j)  $\frac{5}{6}$  of 174 (k)  $\frac{7}{8}$  of 640

5. (a) There are 440 adults in St David's congregation.  $\frac{5}{8}$  of them are women.

(i) How many women are there? (ii) How many men?

(b) There are 365 days in a year. It rained on  $\frac{4}{5}$  of them.

(i) On how many days did it rain? (ii) How many dry days were there?

(c) A turtle laid 132 eggs.  $\frac{5}{6}$  of them were eaten by birds.

(i) How many eggs were eaten? (ii) How many survived?

