

# CAMBRIDGE PRIMARY MATHEMATICS 0845

## FRACTIONS STAGE 3 (GRADE 2)

- **3Nn15** Understand and use fraction notation recognising that fractions are several parts of one whole, e.g.  $\frac{3}{4}$  is three quarters and  $\frac{2}{3}$  is two thirds
- **3Nn16** Recognise equivalence between  $\frac{1}{2}$ ,  $\frac{2}{4}$ ,  $\frac{4}{8}$  and  $\frac{5}{10}$  using diagrams
- **3Nn17** Recognise simple mixed fractions, e.g.  $1\frac{1}{2}$  and  $2\frac{1}{4}$
- **3Nn18** Order simple or mixed fractions on a number line ,e.g. using the knowledge that  $\frac{1}{2}$  comes half way between  $\frac{1}{4}$  and  $\frac{3}{4}$  and that  $1\frac{1}{2}$  comes half way between 1 and 2
- **3Nn19** Begin to relate finding fractions to division
- **3Nn20** Find halves, thirds, quarters and tenths of shapes and numbers (whole number answers)

My sincere thanks to :

Ms Preeti Kaushik,our art teacher for designing and editing this unit

Ms Shruti Verma for maintaining the blog

Mr Madan Saini for reviewing this unit

Suresh Goel  
(Director)

Alliance World School  
Noida , Delhi-NCR, India

# Fractions

(Fractions are several parts of whole)

- $\frac{1}{4}$  One quarter and  $\frac{3}{4}$  Three quarters.



One whole



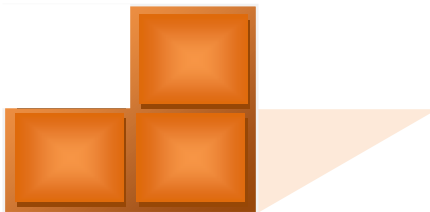
- $\frac{1}{4}$  One quarter and  $\frac{3}{4}$  Three quarters.



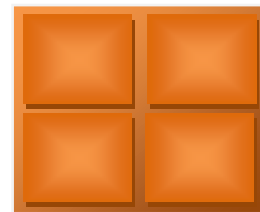
One whole



- $\frac{1}{4}$  One quarter and  $\frac{3}{4}$  Three quarters.



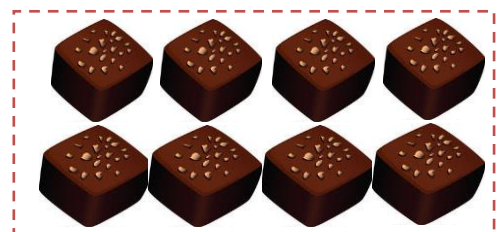
One whole



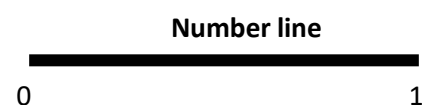
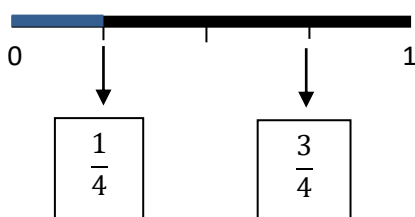
- $\frac{1}{4}$  One quarter and  $\frac{3}{4}$  Three quarters.



One whole



- $\frac{1}{4}$  One quarter and  $\frac{3}{4}$  Three quarters.



(Fractions are several parts of whole)

- $\frac{1}{3}$  One third



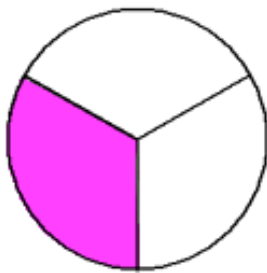
- $\frac{2}{3}$  two third



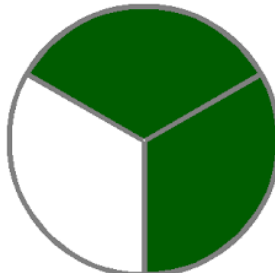
one whole kit-kat



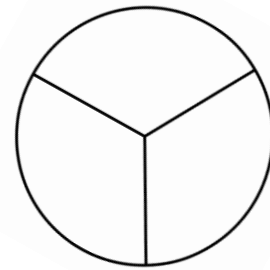
- $\frac{1}{3}$  One third



- $\frac{2}{3}$  two third



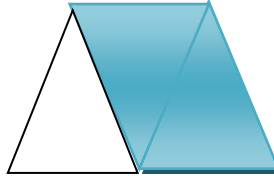
one whole



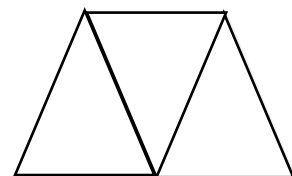
- $\frac{1}{3}$  One third



- $\frac{2}{3}$  two third



one whole



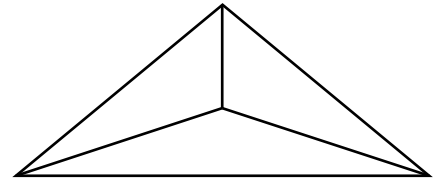
- $\frac{1}{3}$  One third



- $\frac{2}{3}$  two third



one whole



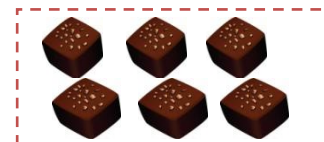
- $\frac{1}{3}$  One third



- $\frac{2}{3}$  two third



one whole



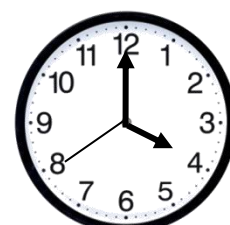
- $\frac{1}{3}$  One third



- $\frac{2}{3}$  two third



Clock



# Fractions

(Fractions are several parts of whole)

- $\frac{1}{2}$  one half is same as  $\frac{2}{4}$  two quarters



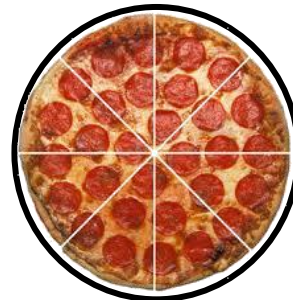
one whole

- $\frac{1}{2}$  one half is same as  $\frac{3}{6}$  three sixths



one whole

- $\frac{1}{2}$  one half is same as  $\frac{4}{8}$  four eighths



one whole

- $\frac{1}{2}$  one half is same as  $\frac{5}{10}$  five tenths



one whole

**Note :**  $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}$ , are equivalent : i.e  $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10}$

$\frac{1}{2}$  One half

1 Whole

 $\frac{2}{4}$  Two quarters

 $\frac{3}{6}$  Three sixths

 $\frac{4}{8}$  Four eights

 $\frac{5}{10}$  Five tenths

Note :  $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}, \frac{5}{10}$ , are equivalent : i.e  $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10}$

# Fractions

( Mixed Fractions)

• 3 halves  $\frac{3}{2}$

is same as

$1\frac{1}{2}$  one whole and one half



3 halves  $\frac{3}{2}$

is same as

$1\frac{1}{2}$  one whole and one half



• 7 quarters  $\frac{7}{4}$

is same as

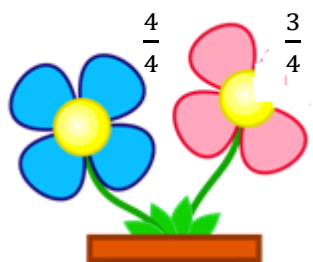
$1\frac{3}{4}$  one whole and three quarters



7 quarters  $\frac{7}{4}$

is same as

$1\frac{3}{4}$  one whole and three quarters

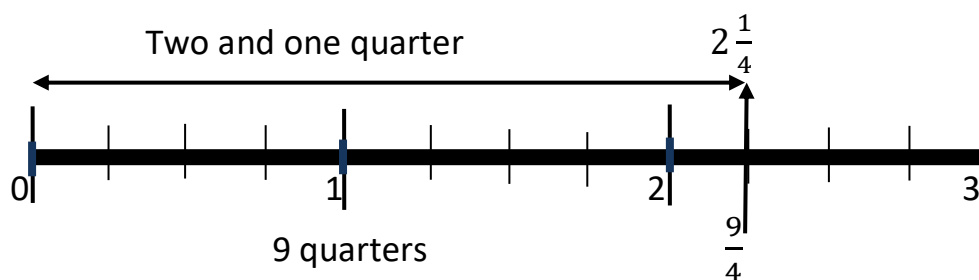


**Mixed fraction** has a whole number and a fraction.

Example :  $1\frac{1}{2}$  ,  $2\frac{3}{4}$

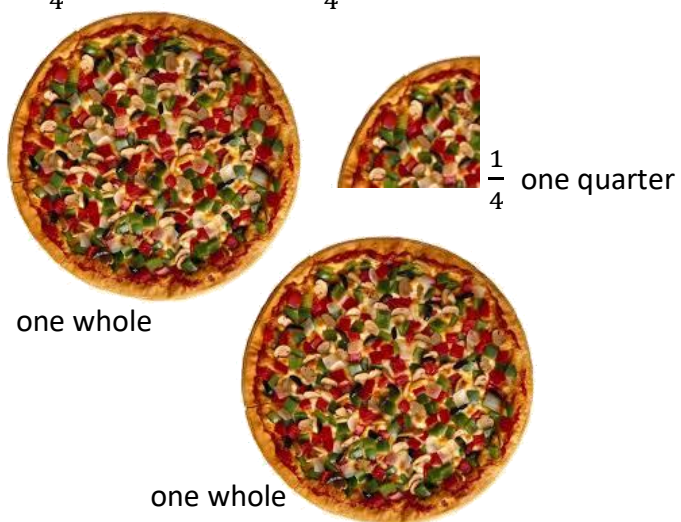


•



9 quarters

is same as

 $2\frac{1}{4}$  two whole and  $\frac{1}{4}$  one quarter

9 quarters

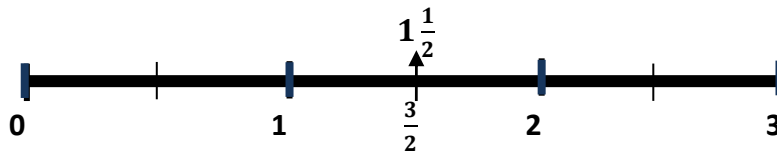
is same as

 $2\frac{1}{4}$  two whole and one quarter

## Order mixed fractions on a number line

- look at the number line below:

$1\frac{1}{2}$   $\left(\frac{3}{2}\right)$  lies between 1 and 2

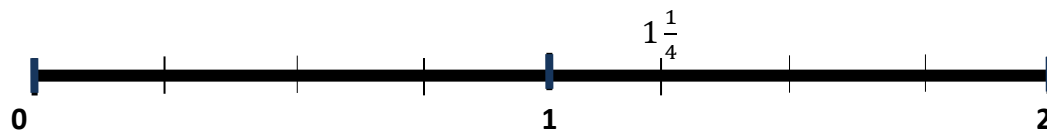


Now try this: Find a fraction between 2 and 3 and represent it on the number line.

---

- look at the number line below:

$1\frac{1}{4}$   $\left(\frac{5}{4}\right)$  lies between 1 and 2

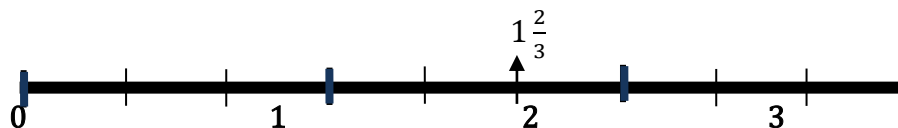


Now try this: Find another fraction between 1 and 2 and represent it on the number line.

---

- look at the number line below:

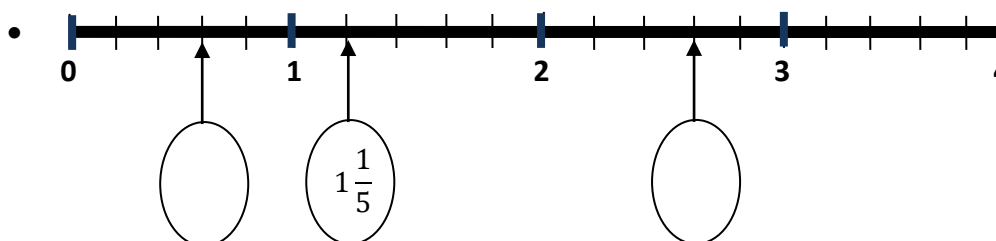
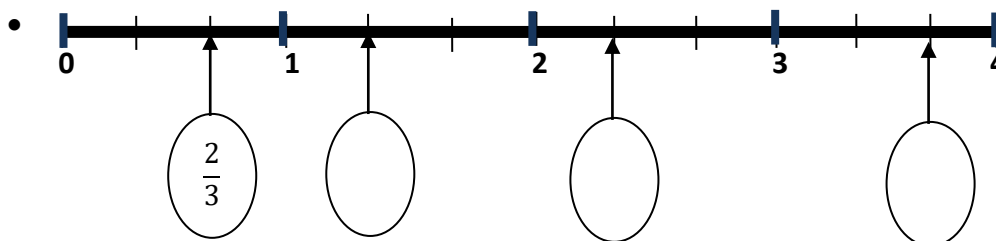
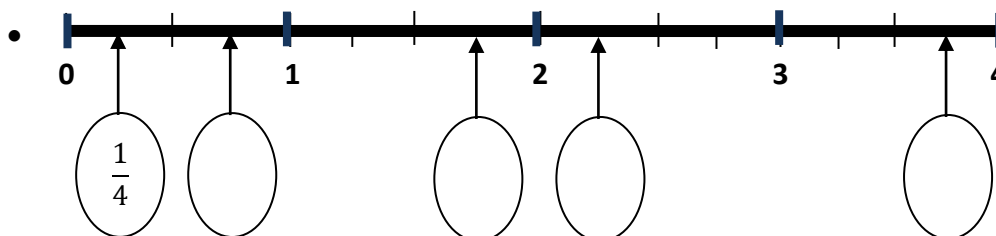
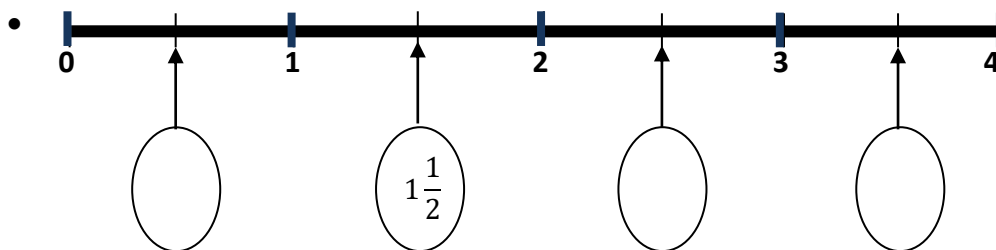
$1\frac{2}{3}$   $\left(\frac{5}{3}\right)$  lies between 1 and 2



Now try this: Find a fraction between 2 and 3 and represent it on the number line.



❖ Complete the number line:



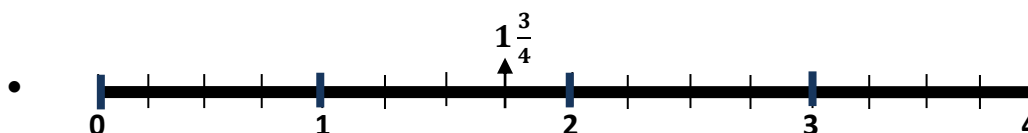
❖ Look at the number line below:



(a) How many halves are there in the  $2\frac{1}{2}$ . .....

(b) Write a fraction which lies between 2 and 4 and represent it on the number line.

.....

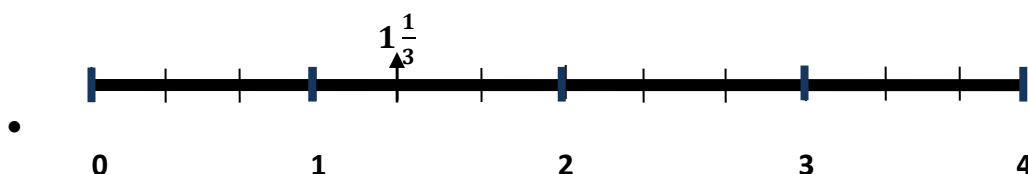


(a) How many quarters are there in the fraction  $1\frac{3}{4}$ . .....

(b) Write a fraction which lies between 2 and 3 and represent it on the number line.

.....

.....

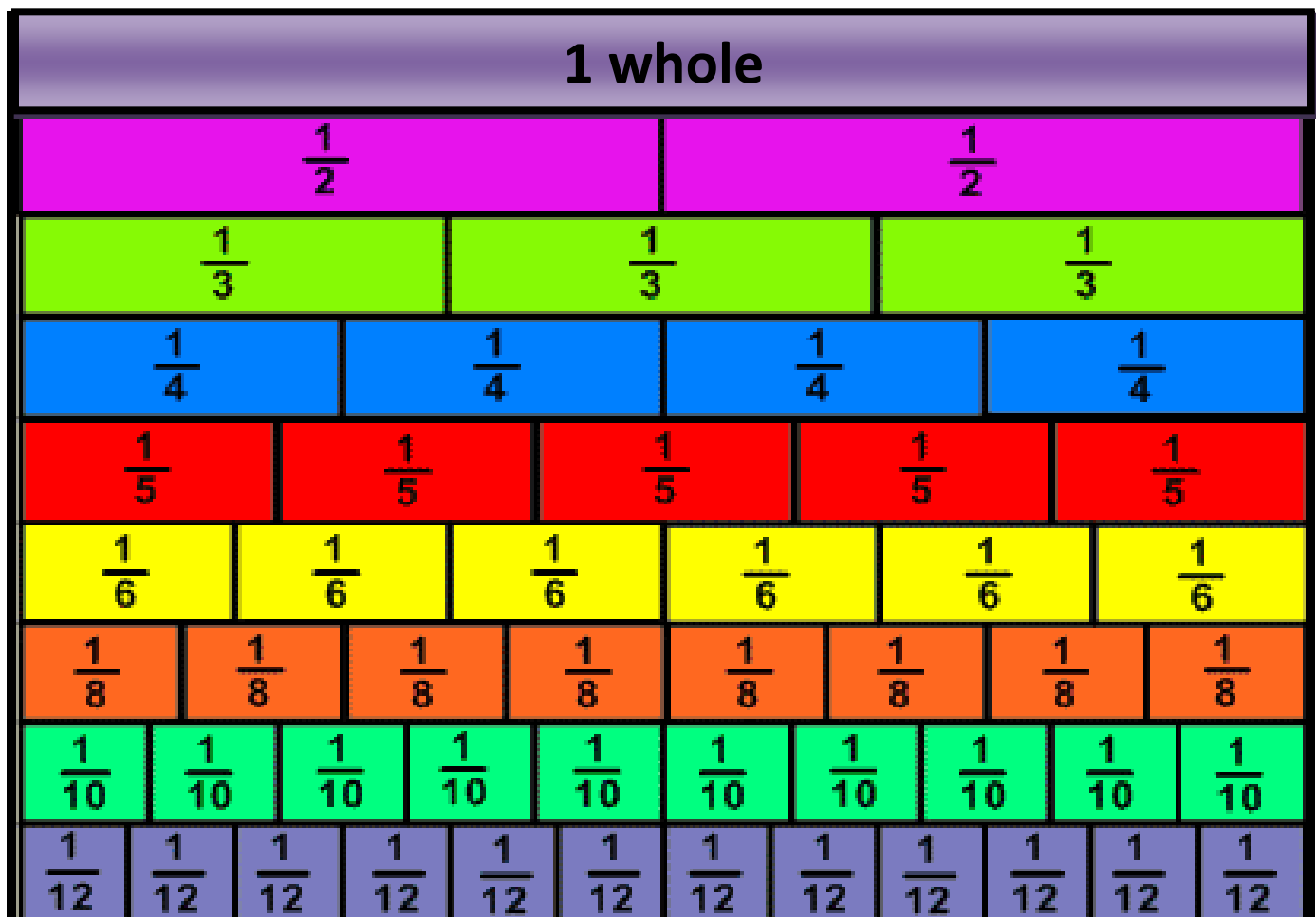


(a) How many one thirds are there in the fraction  $1\frac{1}{3}$ . .....

(b) Write a fraction which lies between 3 and 4 and represent it on the number line.

.

.....

***Fraction Wall***

- Observe the fraction wall and answer the following :

(a) Which is greater  $\frac{3}{4}$  or  $\frac{4}{5}$  .....

(b) Which is smaller  $\frac{5}{12}$  or  $\frac{4}{10}$  .....

(c) Which of these are equal fractions  $\frac{3}{6}$ ,  $\frac{5}{8}$ ,  $\frac{6}{12}$  ..... and .....

- Between the two given fraction insert the correct option :  
( is greater than or is less than or is equal to )

(d)  $\frac{5}{6}$  .....  $\frac{7}{8}$

(e)  $\frac{3}{4}$  .....  $\frac{9}{12}$

(f)  $\frac{3}{8}$  .....  $\frac{5}{10}$

Fraction to division:

(a) Half of 6

$$\frac{1}{2} \text{ of } 6 = 3 \quad \text{as} \quad 6 \div 2 = 3 \quad \text{as} \quad (2 \times 3 = 6)$$

(b) Half of 8

$$\frac{1}{2} \text{ of } 8 = 4 \quad \text{as} \quad 8 \div 2 = 4 \quad \text{as} \quad (2 \times 4 = 8)$$

(c) Half of 10

$$\frac{1}{2} \text{ of } 10 = 5 \quad \text{as} \quad 10 \div 2 = 5 \quad \text{as} \quad (2 \times 5 = 10)$$


---

(d) One third of 6

$$\frac{1}{3} \text{ of } 6 = 2 \quad \text{as} \quad 6 \div 3 = 2 \quad \text{as} \quad (3 \times 2 = 6)$$

(e) One third of 15

$$\frac{1}{3} \text{ of } 15 = 5 \quad \text{as} \quad 15 \div 3 = 5 \quad \text{as} \quad (3 \times 5 = 15)$$

(f) Two third of 6

$$\frac{2}{3} \text{ of } 6 = \text{Two times } \left(\frac{1}{3} \text{ of } 6\right) = 2 \times 2 = 4 \quad \text{as from part (d) } \frac{1}{3} \text{ of } 6 = 2$$

(g) Two third of 15

$$\frac{2}{3} \text{ of } 15 = \text{Two times } \left(\frac{1}{3} \text{ of } 15\right) = 2 \times 5 = 10 \quad \text{as from part (e) } \frac{1}{3} \text{ of } 15 = 5$$


---

(h) One quarter of 8

$$\frac{1}{4} \text{ of } 8 = 2 \quad \text{as} \quad 8 \div 4 = 2 \quad \text{as} \quad 4 \times 2 = 8$$

(i) Three quarter of 8

$$\frac{3}{4} \text{ of } 8 = 3 \text{ times } \left(\frac{1}{4} \text{ of } 8\right) = 3 \times 2 = 6 \quad \text{as from part (h) } \frac{1}{4} \text{ of } 8 = 2$$


---

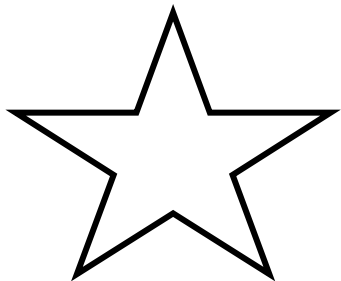
(j) One tenth of 30

$$\frac{1}{10} \text{ of } 30 = 3 \quad \text{as} \quad 30 \div 10 = 3 \quad \text{as} \quad 10 \times 3 = 30$$

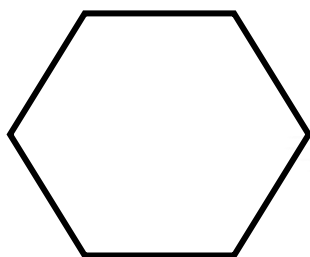
(k) Seven tenth of 30

$$\frac{7}{10} \text{ of } 30 = 7 \text{ times } \left(\frac{1}{10} \text{ of } 30\right) = 7 \times 3 = 21 \quad \text{as from part (j) } \frac{1}{10} \text{ of } 30 = 3$$

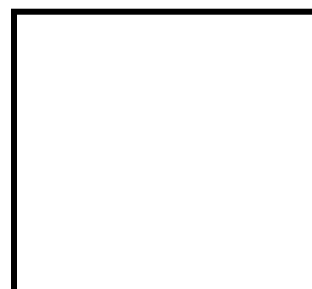
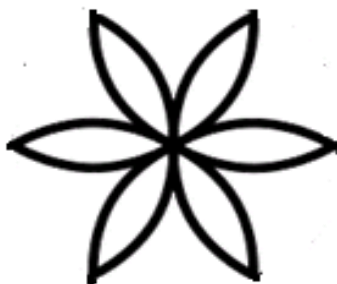
(a) Shade one half ( $\frac{1}{2}$ ) of the following shapes :



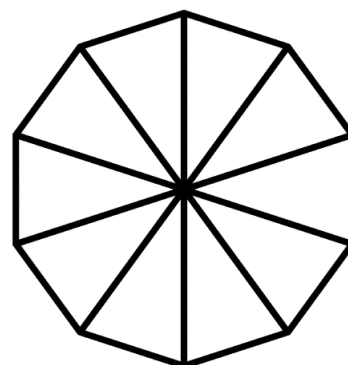
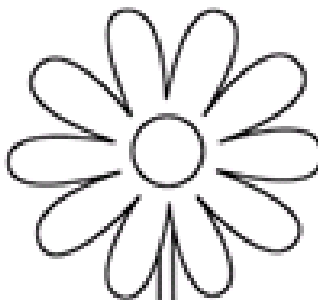
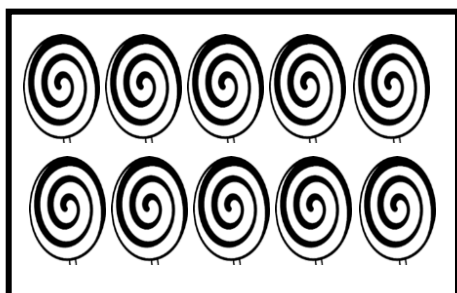
(b) Shade one quarter ( $\frac{1}{4}$ ) in each of the following shapes :



(c) Shade one third ( $\frac{1}{3}$ ) in each of the following shapes :



(d) Shade one tenth ( $\frac{1}{10}$ ) in each of the following shapes :



**Exercise**

(a) Find one half  $\left(\frac{1}{2}\right)$  of the following numbers :

(i) 6 .....

(i) 8 .....

(i) 12 .....

(b) Find one third  $\left(\frac{1}{3}\right)$  of the following numbers :

(i) 6 .....

(i) 12 .....

(i) 15 .....

(c) Find one quarter  $\left(\frac{1}{4}\right)$  of the following numbers :

(i) 8 .....

(i) 12 .....

(i) 16 .....

(d) Find one tenth  $\left(\frac{1}{10}\right)$  of the following numbers :

(i) 10 .....

(i) 100 .....

(i) 120 .....