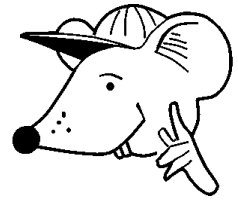




# MATHEMATICS



**N.S. Yr. 2 P.21**

**Recognise simple fractions and equivalence.**

## Equipment

Counters, beads, cubes etc useful for dividing into quarters and halves.  
Crayons.

# MathSphere

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## Concepts

To begin with, work on fractions will be based on practical activities.

There are a large number of activities that can be undertaken, including:

- a. filling jars, cups, containers half full with water/sand etc.
- b. shading half of shapes
- c. dividing an apple, pear etc in half
- d. cutting a bar of chocolate in half
- e. cutting a piece of plasticine into two halves
- f. cutting string in half
- g. learning nursery rhymes involving halves
- h. moving half way towards something

At first all these activities should involve dividing **one object** into two halves, rather than counting several things (eg sweets) into two equal piles.

The progression will be made in recognising  $\frac{1}{2}$  and  $\frac{1}{4}$  as a half and a quarter , using these as a way of writing the fractions.

Also in Year 2 children will be introduced to the idea that a number of objects can be divided in half, for example, colour half of a number of buttons.

After a good deal of work on dividing small numbers of objects in half, children can then move onto the idea of finding half of a number: eg what is half of six? As part of their mental arithmetic work they should be encouraged to learn what half of any even number up to 20 is.

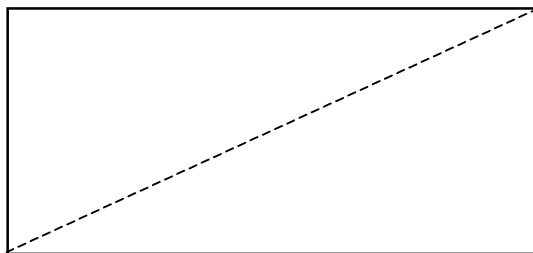
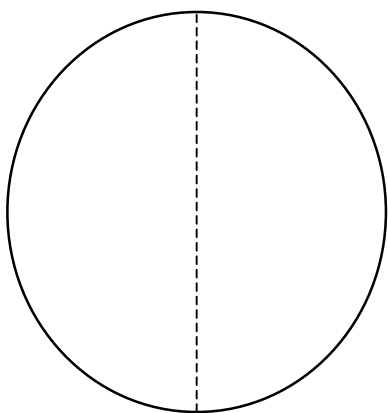
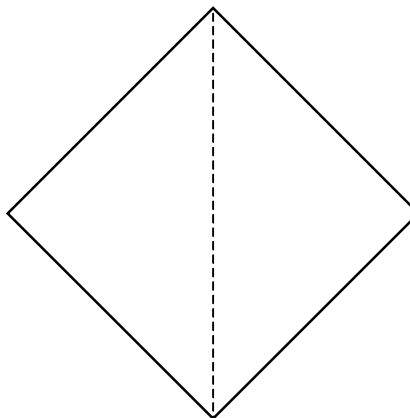
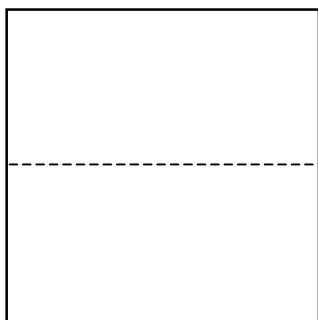
Work on quarters will develop in the same way, and one of the main concepts to re-inforce is that two quarters are the same as a half. This is a very early introduction to equivalent fractions - a crucial concept if children are to understand more complex fraction work in later years.

A further idea to develop is that two halves make a whole and that four quarters make a whole.

## Halves



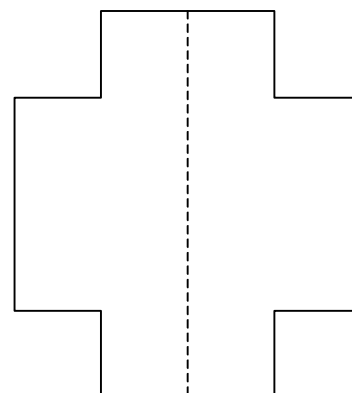
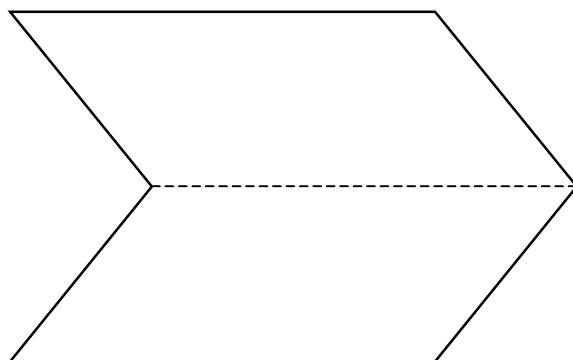
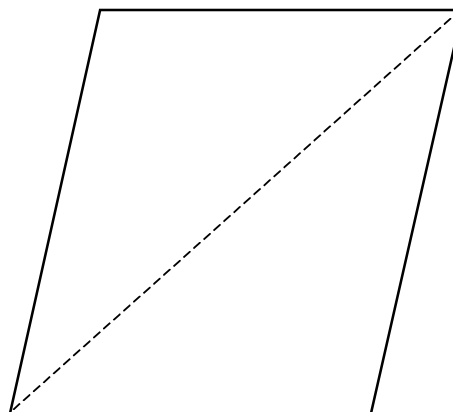
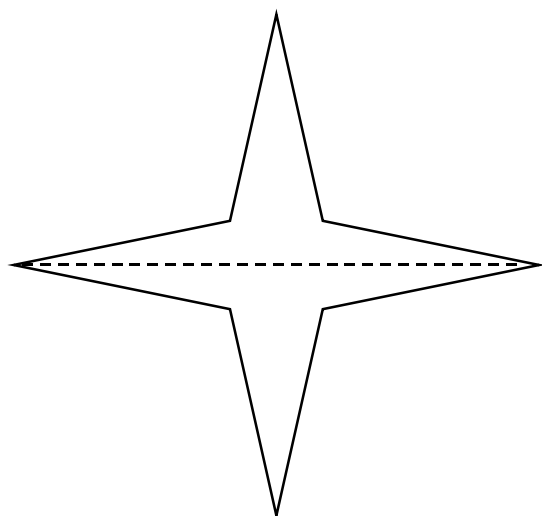
Colour half of  
each shape:



## Halves

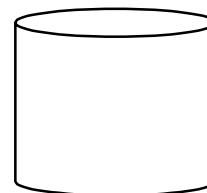
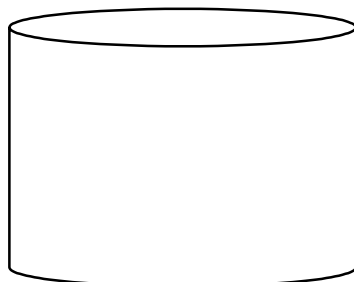
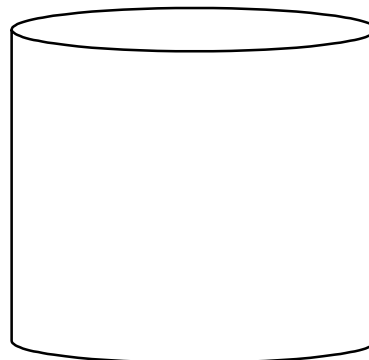
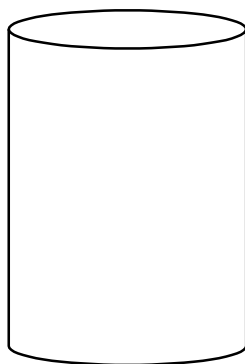


Colour half of  
each shape:



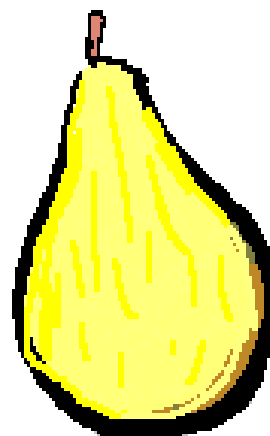
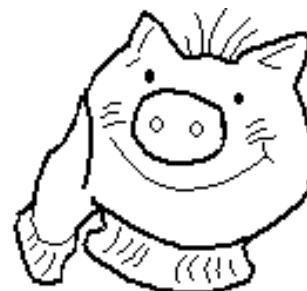


Half fill these jars  
with green slime.  
(Crayon!)



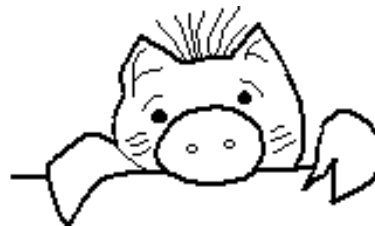
About a half

Draw lines through these fruits to cut them in half, as near as you can:



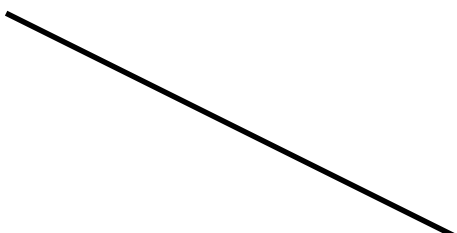
**About a half**

Draw a line about  
half as long as each of  
these lines:

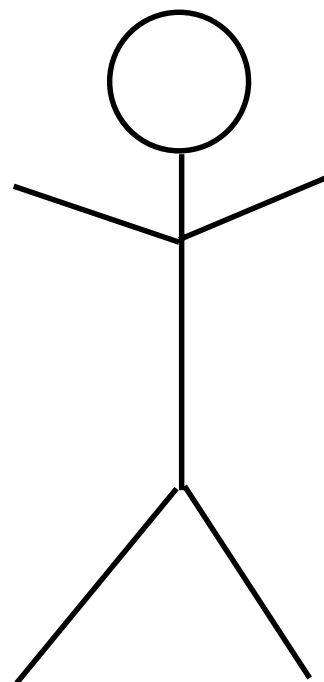


1. 

3. 

2. 

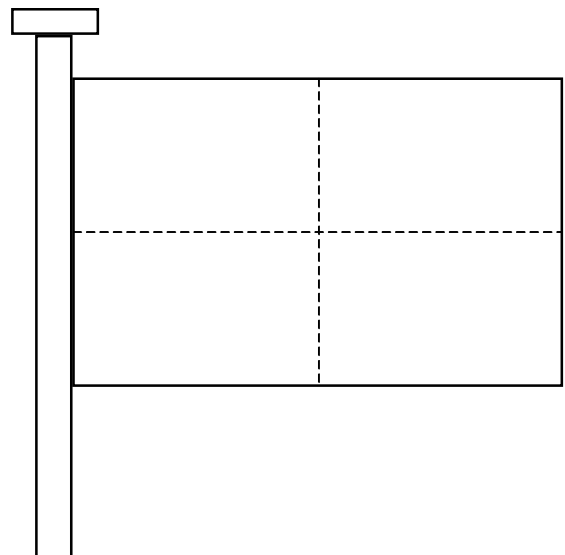
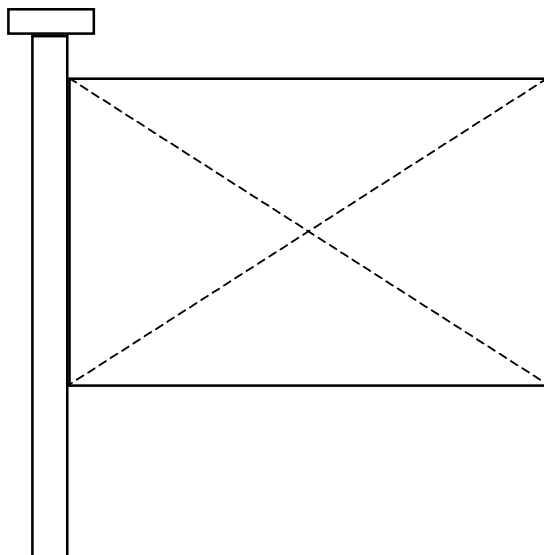
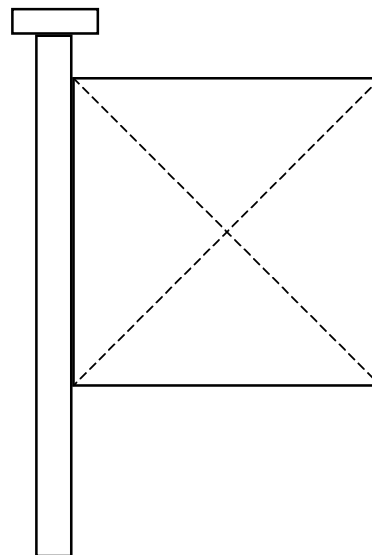
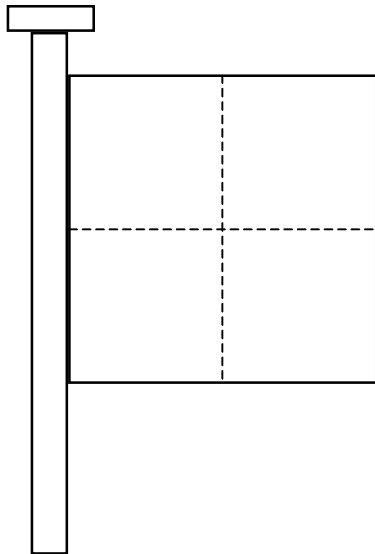
**Draw a stick man about  
half as big as this one:**



## Quarters



Colour a **quarter** of each flag **red**.  
Colour a **quarter** of each flag **blue**.  
Colour a **quarter** of each flag **green**.  
Colour a **quarter** of each flag **yellow**.

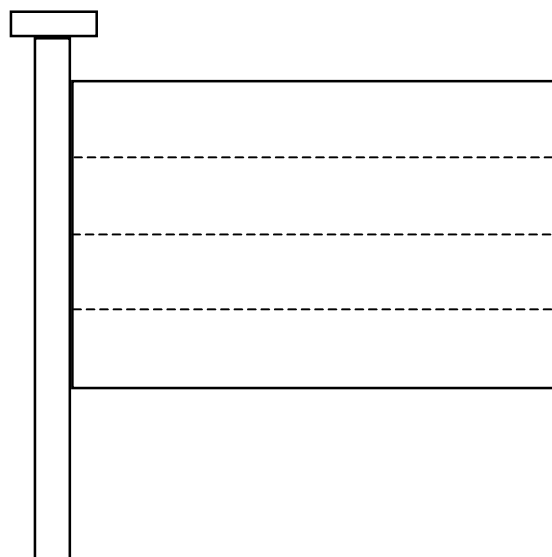
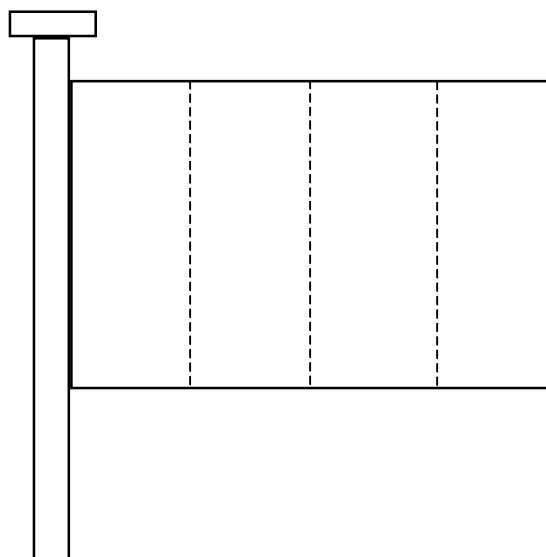
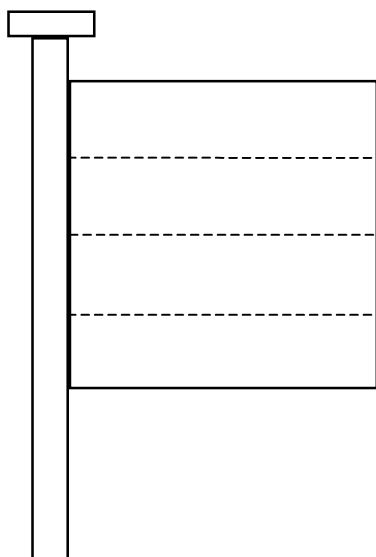




## Quarters

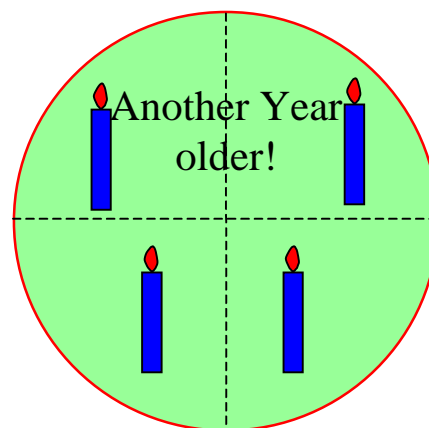
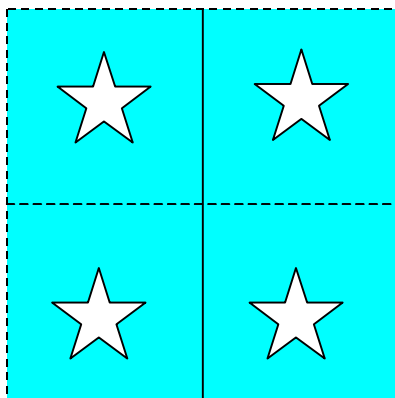


Colour a **quarter** of each flag **red**.  
Colour a **quarter** of each flag **blue**.  
Colour a **quarter** of each flag **green**.  
Colour a **quarter** of each flag **yellow**.



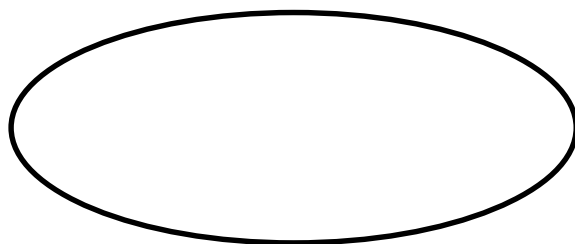
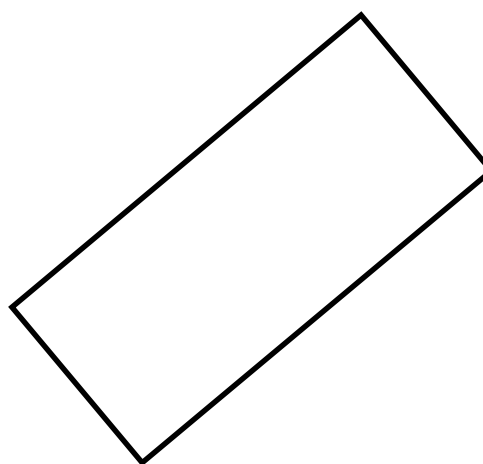
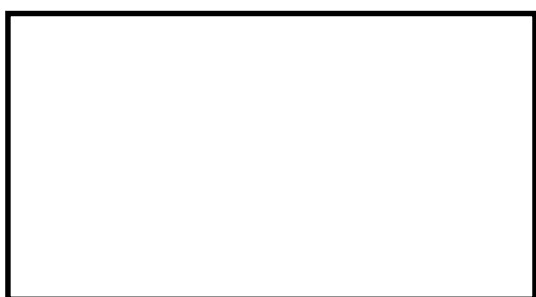
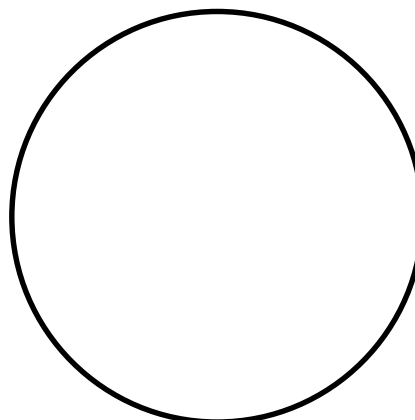
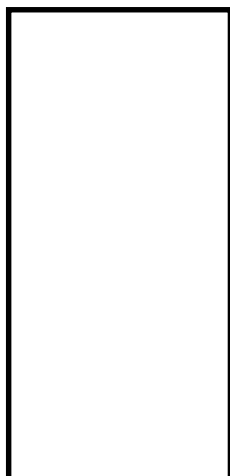
## Quarters

Cut out a quarter of these birthday cakes.



## **Quarters**

**Draw lines through these shapes to cut them into quarters:**



**Draw some shapes of your own and colour a quarter of each.**

### Halves



A half can be written like this:

$\frac{1}{2}$  Try copying this down  
below.

$$\frac{1}{2}$$

$$\frac{1}{2}$$

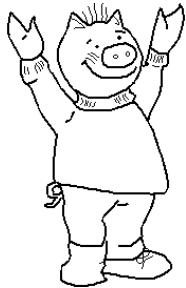
$$\frac{1}{2}$$

$$\frac{1}{2}$$

$$\frac{1}{2}$$

$$\frac{1}{2}$$

### Quarters



A quarter can be written like this:

$$\frac{1}{4}$$

Try copying this down  
below.

$$\frac{1}{4}$$

$$\frac{1}{4}$$

$$\frac{1}{4}$$

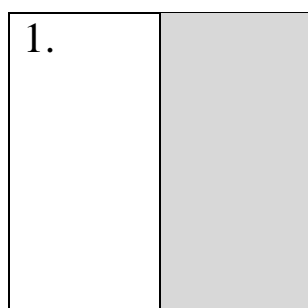
$$\frac{1}{4}$$

$$\frac{1}{4}$$

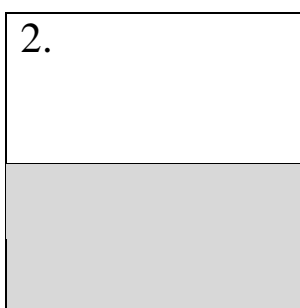
$$\frac{1}{4}$$



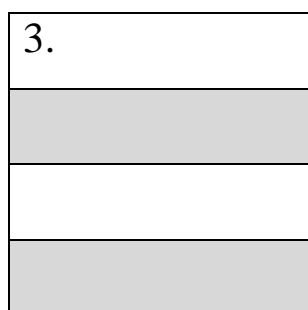
What fraction of each of these shapes is shaded?  
Write your answer in the box next to the shapes.



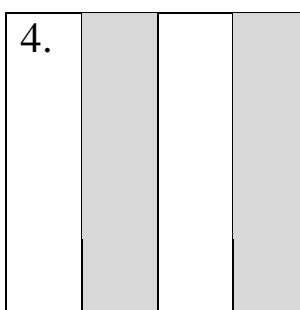
1.



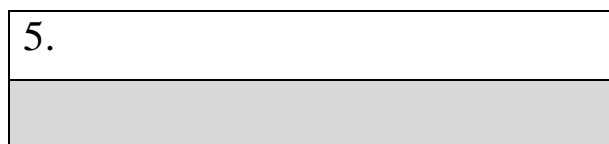
2.



3.



4.

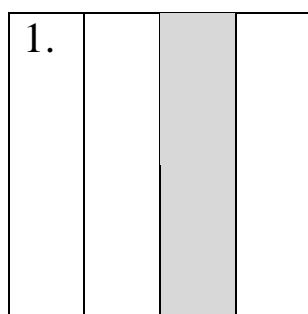


5.

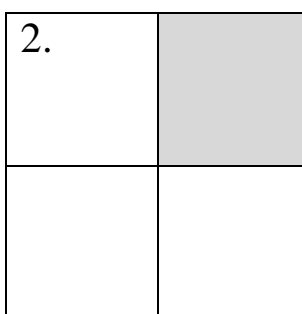


How much of each of these shapes is shaded?

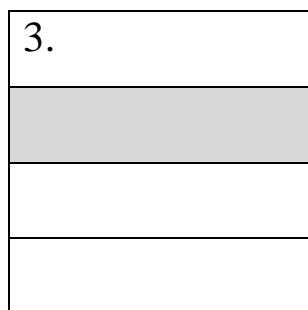
Write your answer in the box next to the shapes.



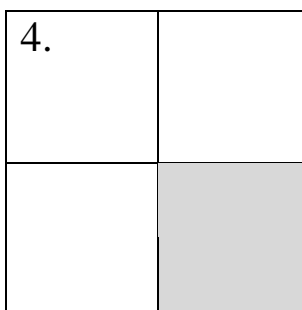
1.



2.



3.

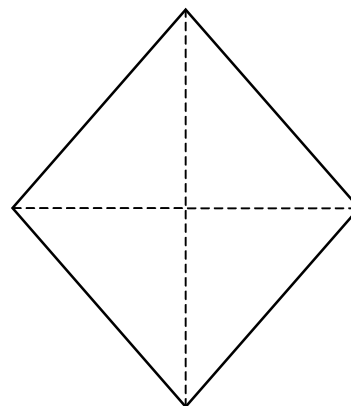
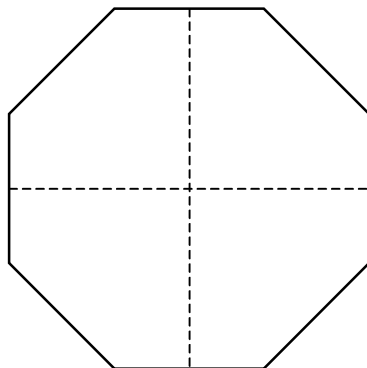
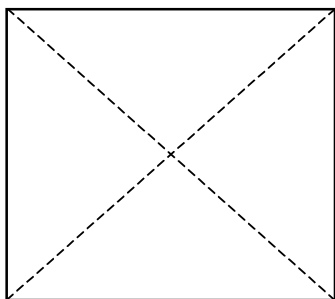


4.

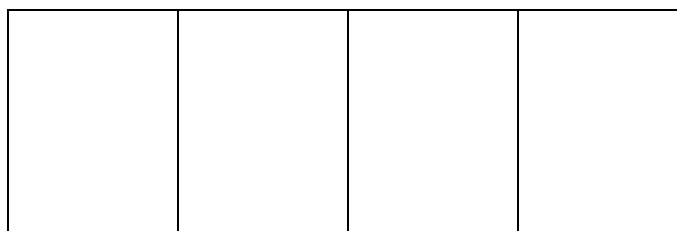
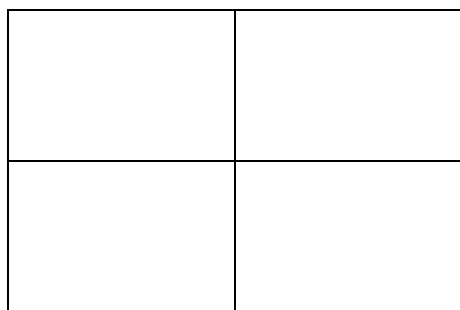


5.

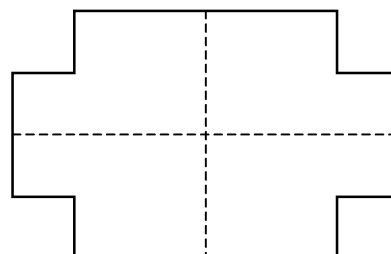
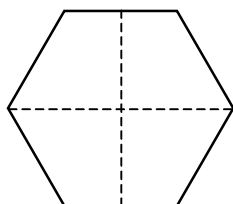
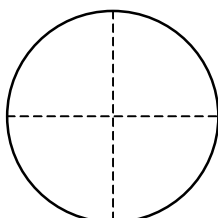
Shade  $\frac{1}{4}$  of these shapes:



Shade  $\frac{3}{4}$  of these shapes:



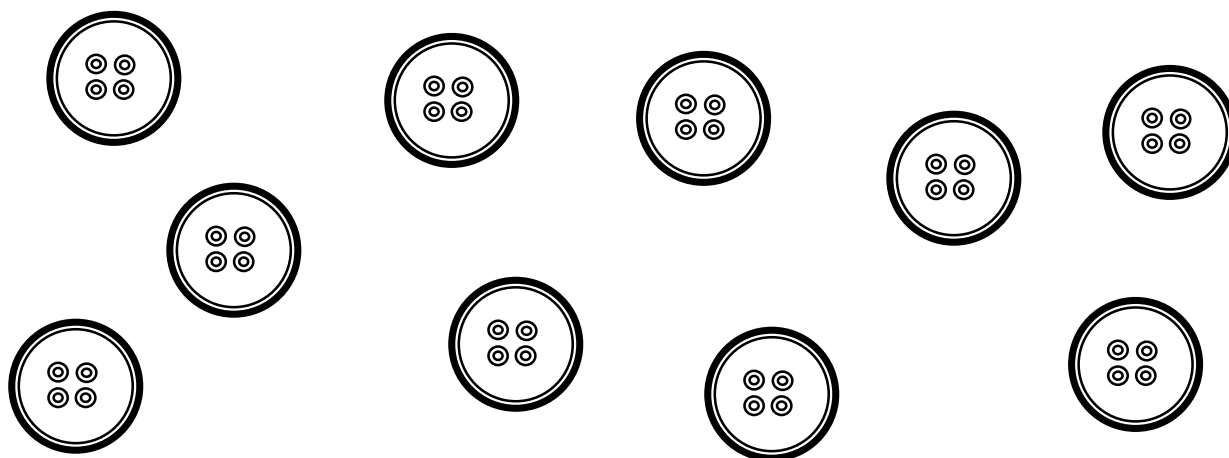
Shade  $\frac{2}{4}$  of these shapes:



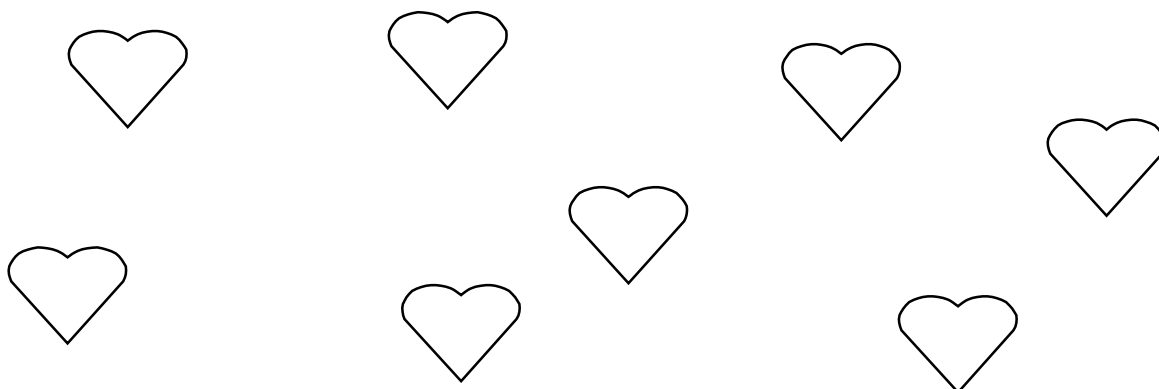
## Halves



Colour half of these buttons.



Now put a ring round half of these hearts:

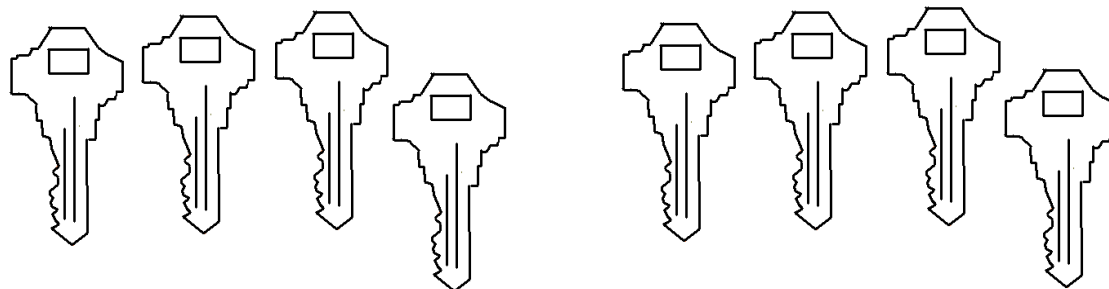




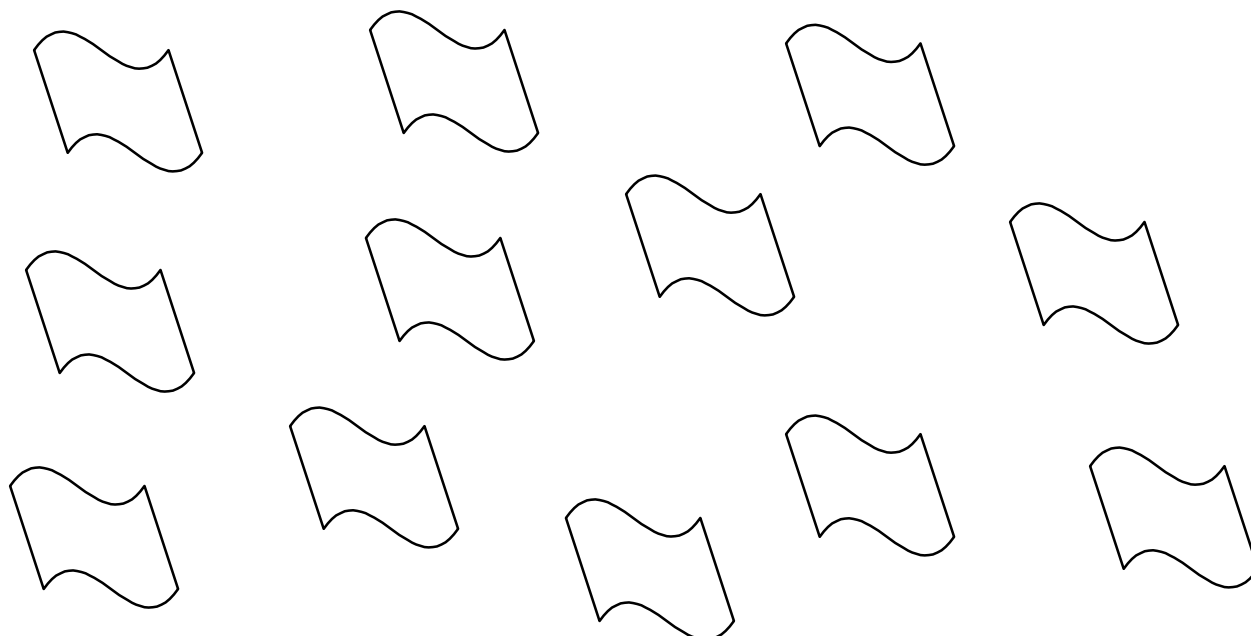
## Quarters



Colour a quarter of these keys  
in your favourite colour.



Now colour a quarter of these  
flags.



Halves

1. What is half of 2 ?

2. What is half of 4 ?

3. What is half of 6 ?

4. What is half of 8 ?

5. What is half of 10 ?

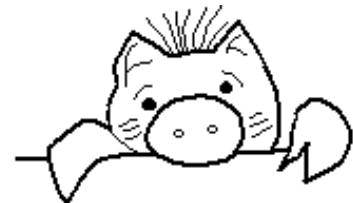
6. What is half of 12 ?

7. What is half of 14 ?

8. What is half of 16 ?

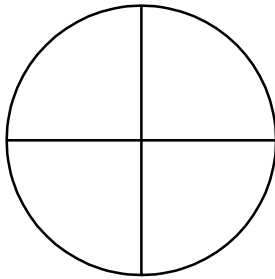
9. What is half of 18 ?

10. What is half of 20 ?

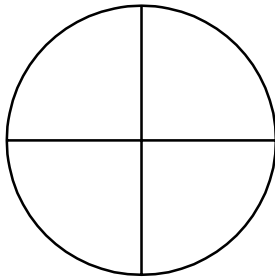


Do you  
notice  
anything  
about your  
answers?

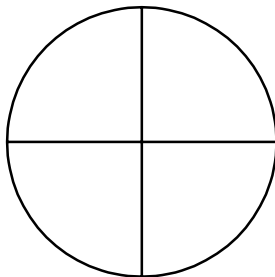
Is there a  
pattern?

Quarters

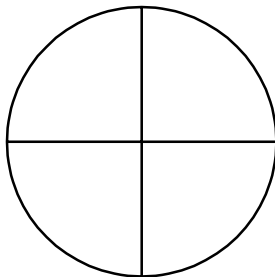
Colour  $\frac{1}{4}$  of the circle.



Colour  $\frac{2}{4}$  of the circle.



Colour  $\frac{3}{4}$  of the circle.



Colour  $\frac{4}{4}$  of the circle.

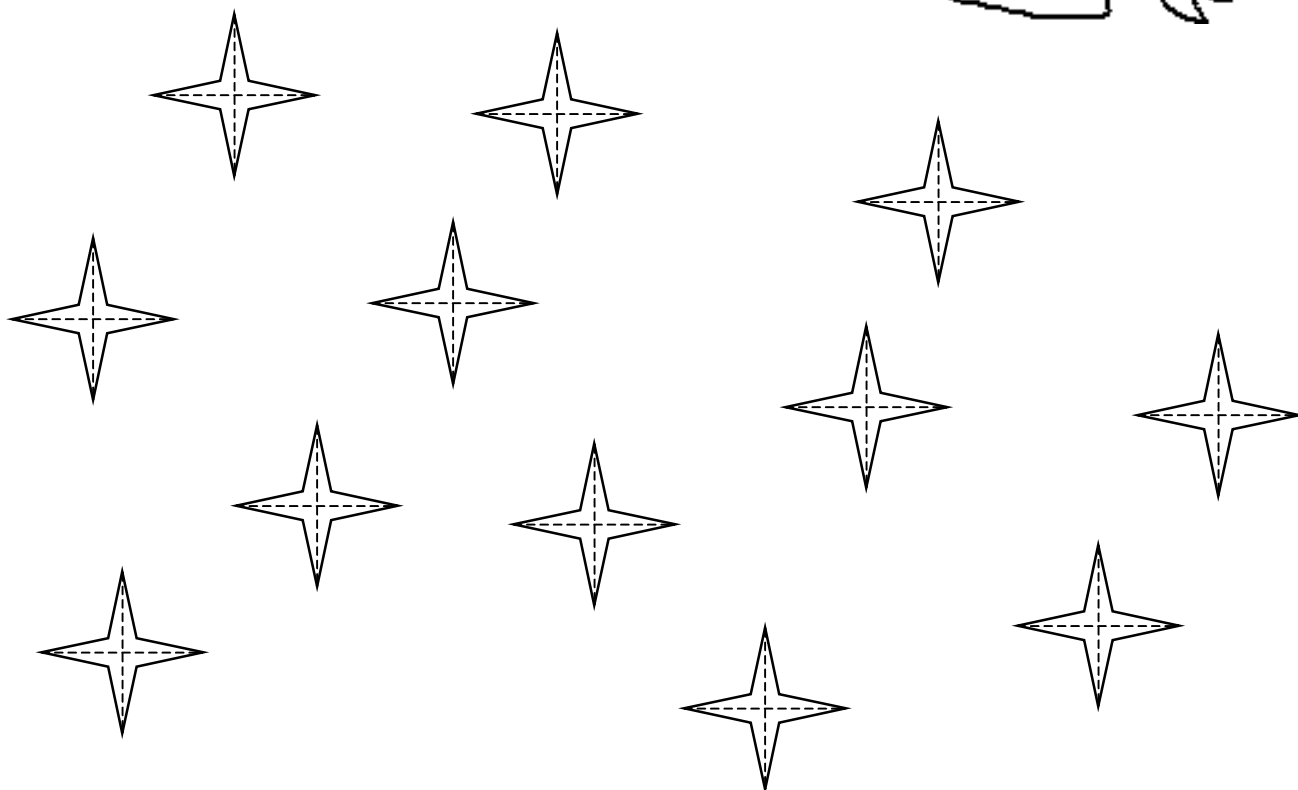


Do you notice anything?

What is two quarters the same as?

**Investigate!**

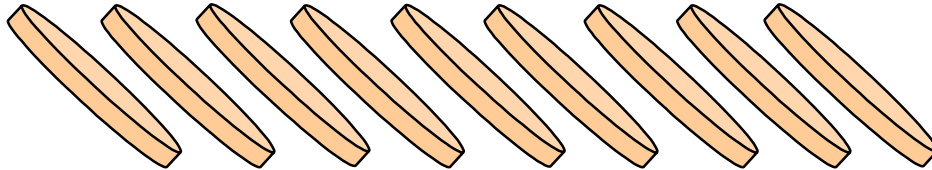
How many ways can you colour half of the star in, using one colour only?



**How many stars did you colour?**

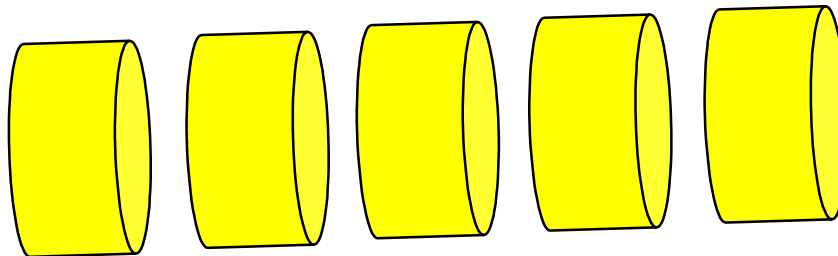
**Have you coloured any the same way?**

**How many stars are left uncoloured?**

**Half a packet of biscuits**

**There are 9 biscuits in the packet.**

**How many biscuits would you have if you had half of them?**

**Half a packet of mints**

**There were 5 mints in a packet.**

**How many would you eat if you ate half of them?**

Q. How do you get an elephant into a mini?

A. Half in the front and half in the back!

