

Symmetry



Observe the leaf shown alongside.

Take another leaf like this one, which has many veins.

In the middle, there is a vein that runs the full length of the leaf.

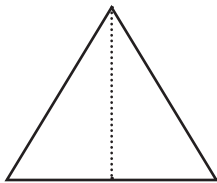
Fold the leaf along that vein.

What do you see?

One part of the leaf falls exactly on the other.

Fold the leaf in different ways along other veins. What do you see?

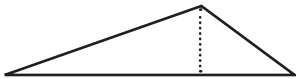
One part of the leaf does not fall exactly on the other.



Take a triangular piece of paper as shown alongside.

Fold it along the dotted line.

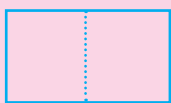
Does one part of the triangular piece of paper fall exactly on the other?



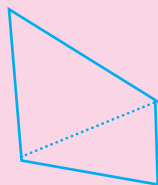
Take another triangle, as shown in the second figure, and fold it along the dotted line. Does one part of the triangle fall exactly on the other?

If the two parts of a figure made by a line fall exactly on one another, then the figure is said to be symmetrical about that line. And, if the two parts do not fall exactly on one another, then the figure is not symmetrical about that line.

◆ Some of the following figures are symmetrical about the given dotted line, and some are not. Observe them carefully.



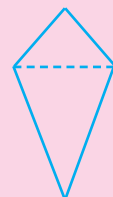
Symmetrical



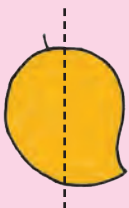
Not symmetrical



Symmetrical



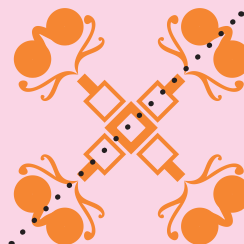
Not symmetrical



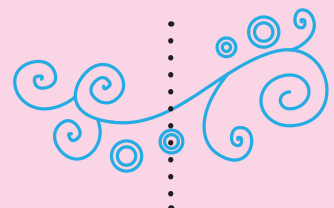
Not symmetrical



Not symmetrical

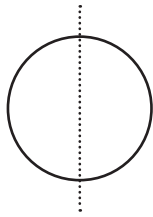


Symmetrical



Not symmetrical





Symmetrical

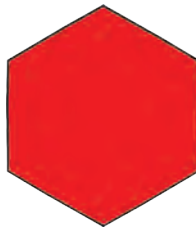
Symmetrical

Not symmetrical

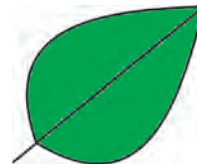
Symmetrical

Not symmetrical

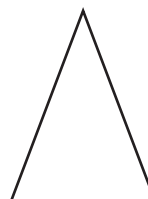
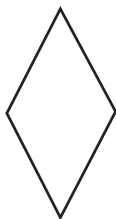
- ◆ Determine whether the figures given below are symmetrical about any line or not. Put a tick below the picture if it is symmetrical and a cross if it is not.

☐☐☐☐☐☐

- ◆ For each of the figures below, draw a line along which you would fold the figure to show that it is symmetrical.



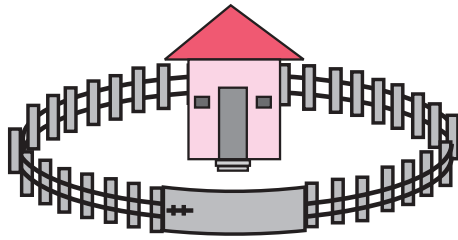
- ◆ In each of the symmetrical figures given below, colour the two symmetrical parts in different colours.



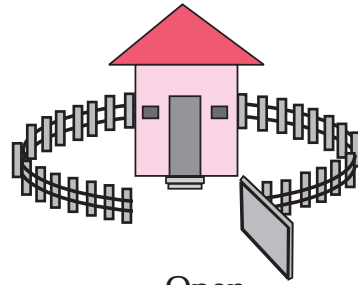
- ◆ Take a square piece of paper. Examine its symmetry by folding it in different ways.

 **For teachers :** Conduct an activity to let the children check the symmetry of different shapes such as an equilateral triangle, an isosceles triangle, a parallelogram, a circle. Get them also to make a collection of symmetrical pictures of animals, birds, leaves, flowers, etc.

Closed figures and open figures

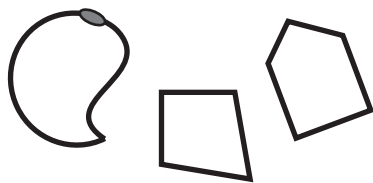


Closed



Open

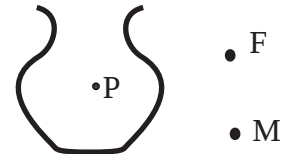
Some closed figures



Some open figures



Think !



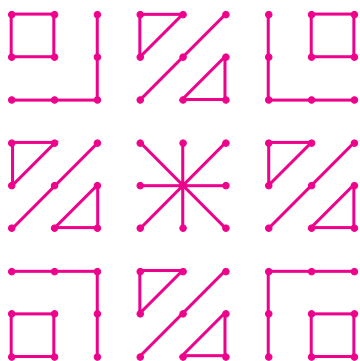
Can we join points 'A' and 'B' with a line that does not touch the given figure?

Can we join points 'B' and 'C' in the same way ?

Can we join points 'P' and 'F' with a line that does not touch the given figure?

Can we join points 'P' and 'M' in the same way ?

♦ Find the open and closed figures from those given below.



♦ Observe the closed and open figures in the *rangolis* shown here.
Colour the *rangolis*.

