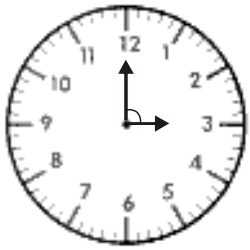
6 Angles in our surroundings

Sujatha lives in *Khammam*. She is going to her uncle's home in *Rajamundry* for Pongal holidays. Sujatha's grandmother gave her an old watch before she left home.

Sujatha saw the time in her watch many times during the day-
When she got on the bus it was 3 o' clock. When she stopped for tea it was 4 o' clock. When she reached her uncle's house it was 6 o' clock.

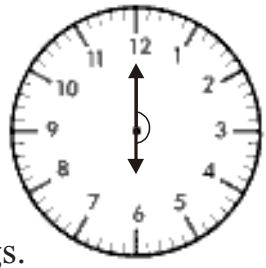
See the small and big hands of the watch at different times.



At 3 o'clock, the small hand is on 3 and the big hand is on 12.

The angle between the hands of the clock is shown here.

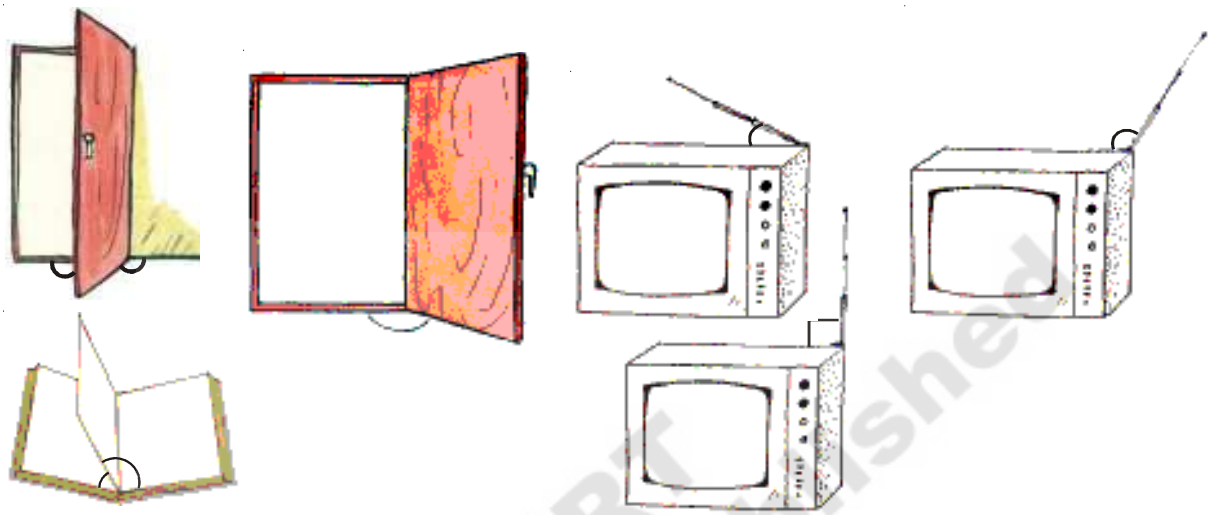
At 4 o'clock, the small hand moves to 4 and the angle changes.



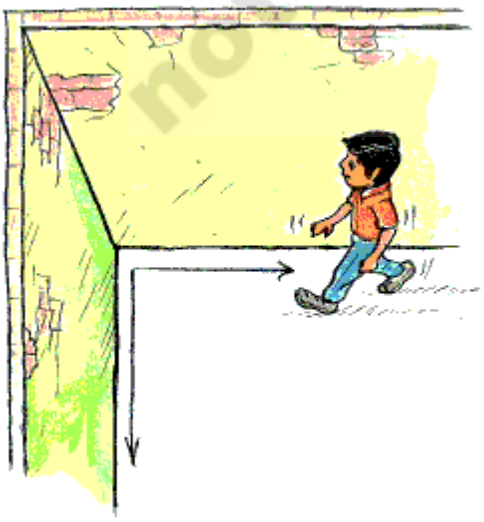
At 6 o'clock, the angle has changed again.

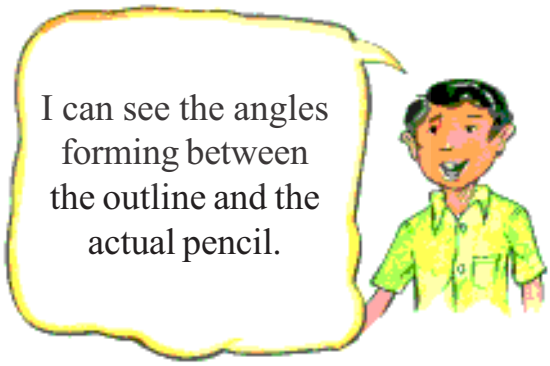
So the hands of a clock from different angles at different timings.

We can observe angles around us. Sujatha came back to Khammam after her holidays and told Abida and Keshav that angles are formed when something turns. Observe the angles between the door and the wall, between the book and its page and between the T.V. and it's anteena.



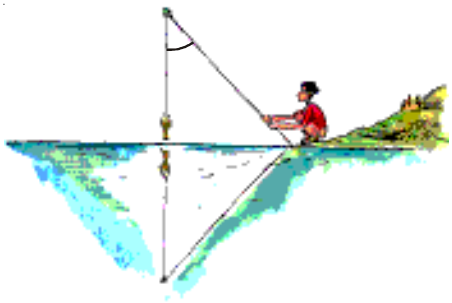
Sujatha put the pencil flat on a paper. She drew its outline. Then she turned it.





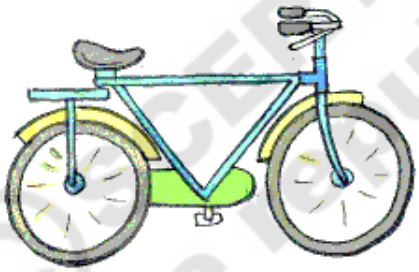
Angles are formed at corners also. Two walls make an angle along their corners.

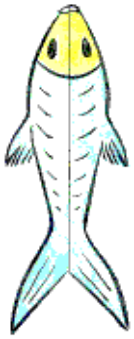
See the angles marked in the pictures below. Mark more angles in them.



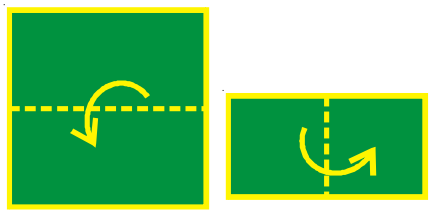
Do This

1. Mark angles in given pictures. Try to mark more than one angle in each picture.





Activity

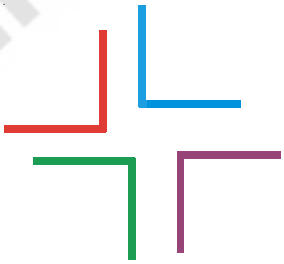


Take a square sheet of paper. Fold it twice as shown.

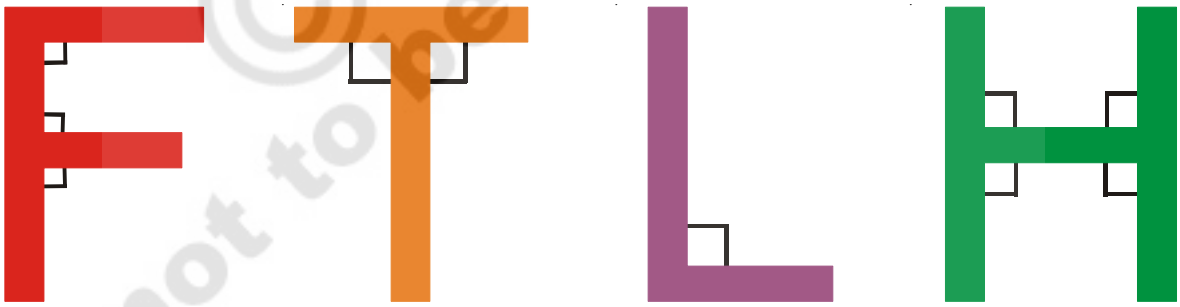
Unfold it and see.

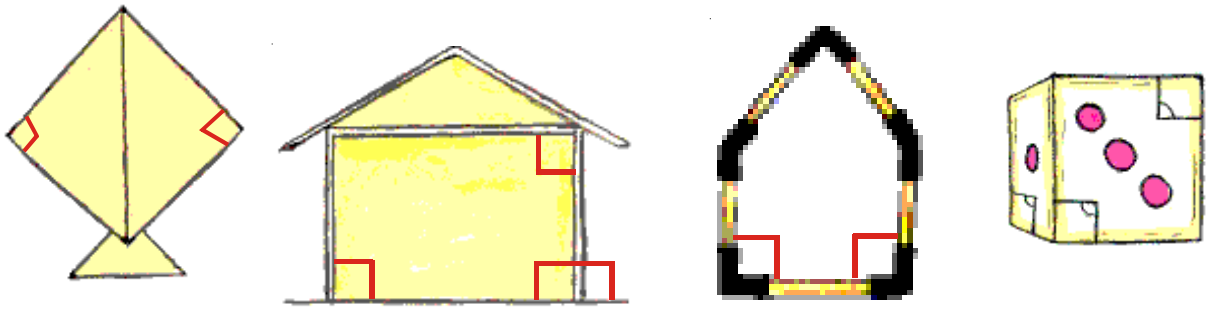
It looks like this. Observe the point where the two creases are meeting. Mark the angles. Do all the angles look same or different?

If we draw the angles they look like this. These angles are called right angles.



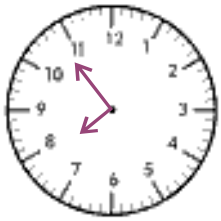
Observe the figures given below. We can see right angles in them.

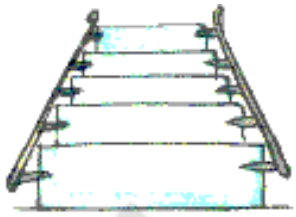




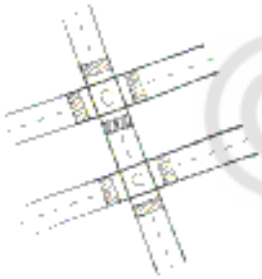
Do This

1. Mark the right angles in the given pictures. You can mark more than one angle.









Did you notice something? The hands of the clock make right angles at 3 o' clock and 9 o' clock. But they make right angles at other times also.

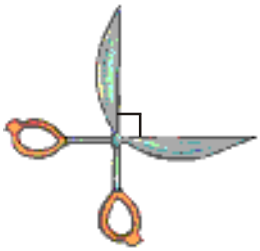
Try This

1. Draw a clock where the hands form a right angle.

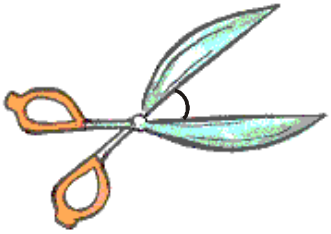
2. Look at the walls in your room. How many right angles are there? Count them.

More or less of a right angle

Look at the scissors. The blades are forming a right angle.



Look at the figure below.

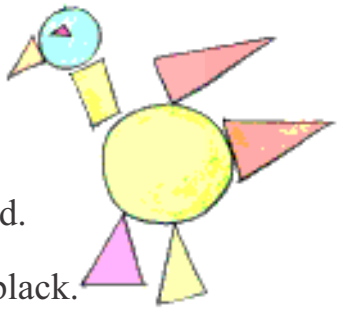


The blades are not forming a right angle; the marked angle is less than a right angle.

Can you open the scissors to get an angle more than a right angle? Try it.

Do This

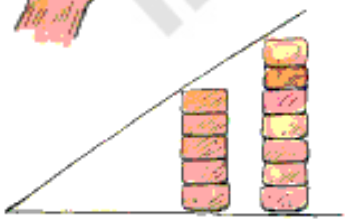
1. Look at the pictures. Mark the angles and colour them as indicated below.

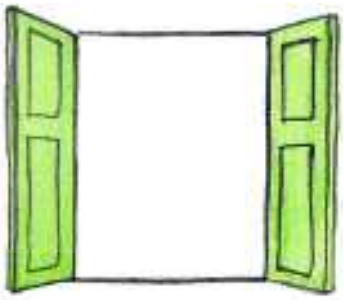


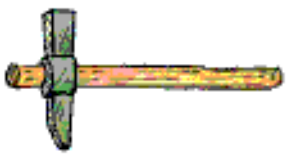
(a) If the angle is right angle then mark it in blue.

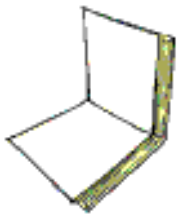
(b) If an angle is less than a right angle then mark it in red.

(c) If an angle is more than a right angle then mark it in black.

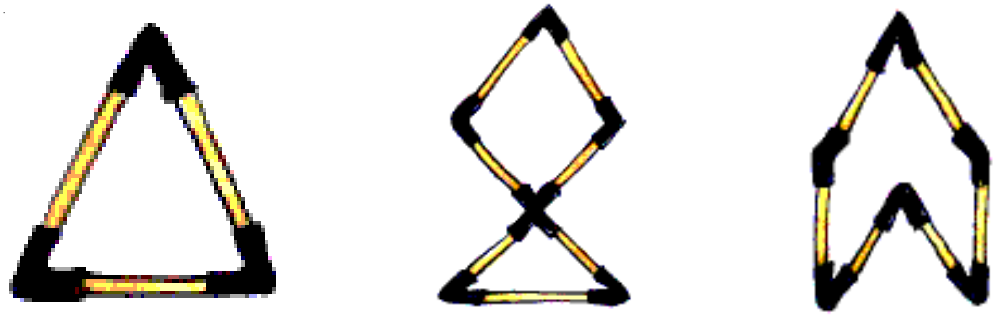








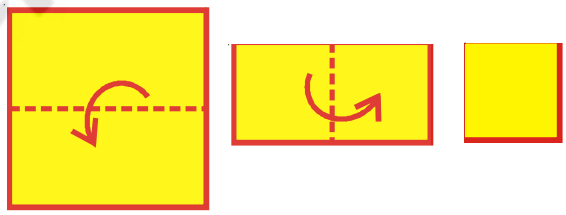
2. Identify the angles in these figures which of these are more than right angles and which of these are less than right angle?



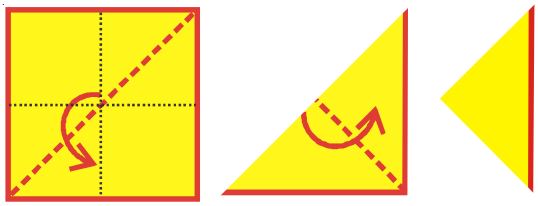
Activity

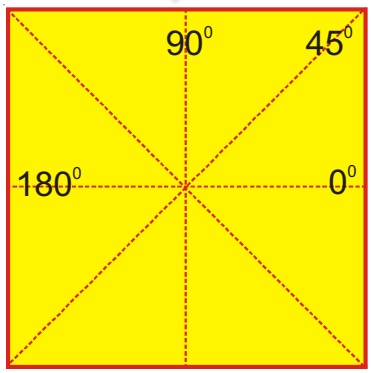
We have seen that some angles are more than right angle and some are less. How do we measure angles? We can measure them in degrees. The measure of a right angle is 90°.

Take a square piece of paper. Fold it in half as shown and then fold again.Open it.



Now fold the paper in half as shown. Then fold it again. Open the paper. It will be creased.





Mark the angles as shown.

Observe where the four creases (dotted lines) are meeting. Are they meeting at the same place or same point? This is the centre of the square.

Try This

1. We can find the centre of the circle in the same way. Take a bangle and use it to draw a circle on a paper. Cut it out.

Now fold the circle to get the four angles. Also mark the centre of the circle.

Angles of the dancing men

Look at the dancing figures. Mark the angles. Draw two more dancing postures.