

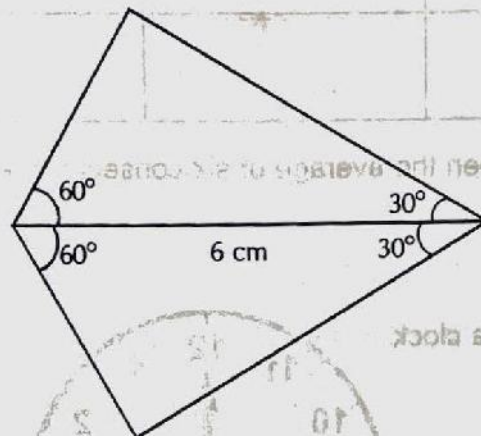
## MATHEMATICS

Class: 6

Time: 2 hours

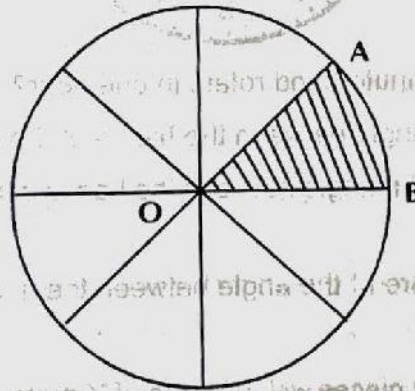
- 15 minutes is given as cool-off time.
- Read the questions carefully during this time.
- Attempt **ANY SIX** activities from Activity 1 to Activity 8.

## Activity 1



Draw the picture with the given measures.

## Activity 2



In the figure, a circle is divided into equal parts.

- What fraction of the circle is shaded?
- What is the measure of  $\angle AOB$ ?
- Draw a circle of radius 3 centimetres and shade  $\frac{1}{6}$  of it.

### Activity 3

Satheesh is trying to find the peculiarity of the average of six consecutive even numbers. The data used for it is given in the table.

a. Complete the table.

Even numbers	Sum	Average
6, 8, 10, 12, 14, 16	66	$\frac{66}{6} = 11$
10, 12, 14, 16, 18, 20	.....	.....
.....	.....	.....

b. Write the relation between the average of six consecutive even numbers and the two middle numbers.

### Activity 4

Look at the picture of a clock.

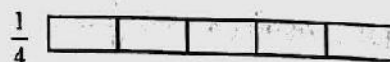


- How much degrees do the minute hand rotate in one hour?
- What is the measure of the angle between the hands of the clock in the picture?
- What will be the measure of the angle between the hands at 4 o'clock? Write another time having the same angle.
- Write a time when the measure of the angle between the hands is  $90^\circ$ .

### Activity 5

Raghu cuts several rectangular pieces with a length of  $\frac{1}{4}$  metre and breadth of  $\frac{1}{2}$  metre from a cardboard.

- What is the area of one rectangular piece?
- How many such pieces are required to make a rectangle having an area of 1 square metre?
- 5 pieces are joined to make a rectangle as in the figure.



One side of this rectangle is  $\frac{1}{4}$  metre. Find its area and the length of the other side.

### Activity 6

Five friends measured their weights as part of the Health Club activities of the school. But Veena and Manu forgot to write their weights.



Anu  
50 kg



Riyas  
45 kg



Veena



Manu



Jose  
35 kg

Their average weight is 46 kg.

- What is the total weight of the five friends?
- Find the total weight of Veena and Manu.
- If the weight of Veena and Manu are equal, what will be their weights?
- When Nadira joined the group, the average weight did not change. Find the weight of Nadira.

### Activity 7

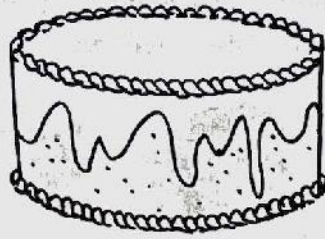
A farmer has two different breeds of cows. The number of cows in each breed and the quantity of milk got in one week is given below.

Breed	Number of cows	Total quantity of milk got in one week (litre)
First Breed	3	210
Second Breed	4	252

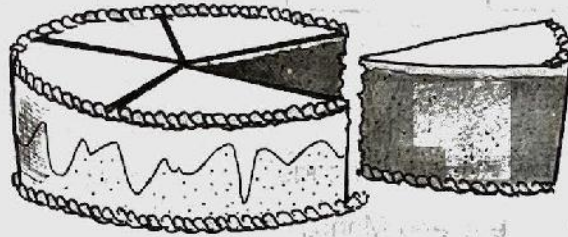
- What is the average quantity of milk got from a cow of the first breed?
- What is the average quantity of milk got from a cow of the second breed?
- Which breed is better on the basis of the average quantity of milk he got?

Activity 8

Activity 8



The picture shows a cake bought by Ammu, Malu and their three friends. They divided the cake into equal parts.



- a. What fraction of the cake did each one get?
- b. Malu divided her piece into two equal parts and gave one piece to her sister. What fraction of the whole cake did her sister get?
- c. Ammu divided her piece into three equal parts, and ate two parts. What fraction of the whole cake did Ammu eat?

A family has two different breeds of cows. They produced cows in equal parts and it is a quantity of milk and one week's given below.

Breed	Quantity of milk
Red	100 litres
Black	150 litres