AILET

Quick Revision of Clocks for CLAT

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The clock is an important and common topic of the Logical reasoning section. It is not a difficult task to score full marks in this part provided you are thorough with the basics of the subject. In this article, the basics of the clock for CLAT including the principles and formulas to solve the clock questions.

Points to Remember

Whenever you come across a question from this topic, always remember the following points:

1. The hour hand of a clock completes two full circles in 24 hours.
2. There are three hands in the clock: Hour hand, minute hand and second hand.
3. The minute hand completes one full circle in one hour.
4. A clock is composed of 360 degrees and is equally divided into 12 divisions.
5. The angle between two consecutive divisions is (360/12) = 30o
6. The angular value of a minute is 6 degrees.
7. Speed of a minute hand = (360/60) = 6 degree per minute
8. Speed of an hour hand = (30/60) = (1/2) degree per minute

Problem Solving

When you get a question from this concept, you have to apply a certain formula. Generally, the questions are asked where you are asked the angles at which minute hand and hour hand are standing at a particular time or the distance swept by either of the hands of the clock or when do the hands coincide. To find the distance covered the following two formulas will be used:

1. The distance swept by hour hand = (360/12) * (no. of hours)

If the no. of hours are not in the whole number, convert it into fractions.

For instance: 3 hours 30 min = [3+ (30/60)] hours

= 3+ (1/2) = 7/2 hours

1. The distance swept by minute hand = (360/60) * no. of minutes.
2. The angle at which the hour hand and the minute hand are standing:

Find the respective angle at which both these hands are standing and calculate the difference.

Illustrations

1. A clock started at 5 p.m. and by 30 minutes past 8, the hour hand has turned through what degrees?

Solution: No. of hours = 3+ (30/60) = 3+ (1/2) = 7/2 hours

The angle at which hour hand has turned = (360/12) * (7/2)

= 105 degrees

1. What is the angle between the minute hand and the hour hand when the time is 7:15 pm?

Solution: Angle traced by hour hand at 7:15 pm = (360/12) * (29/4) = 217.5

Angle traced by minute hand in 15 min = (360/60) * 15 = 90o

Required angle = 217.5 – 90 = 127.5o

1. What distance will be covered by a minute hand in 8 minutes?

Solution: Angular Value of one minute = 6 degrees

Distance covered by minute hand in 8 minutes = 48 degrees.