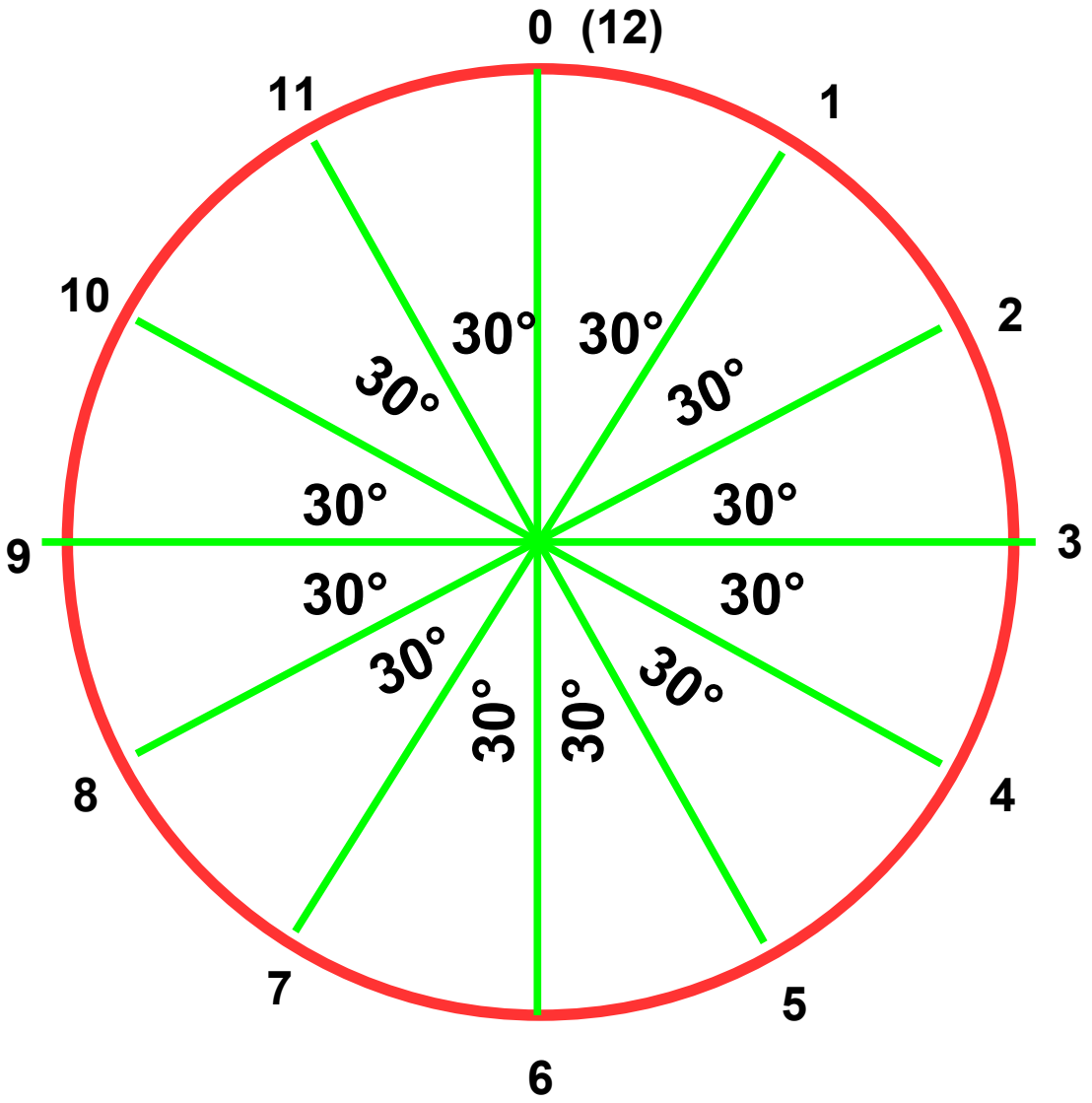
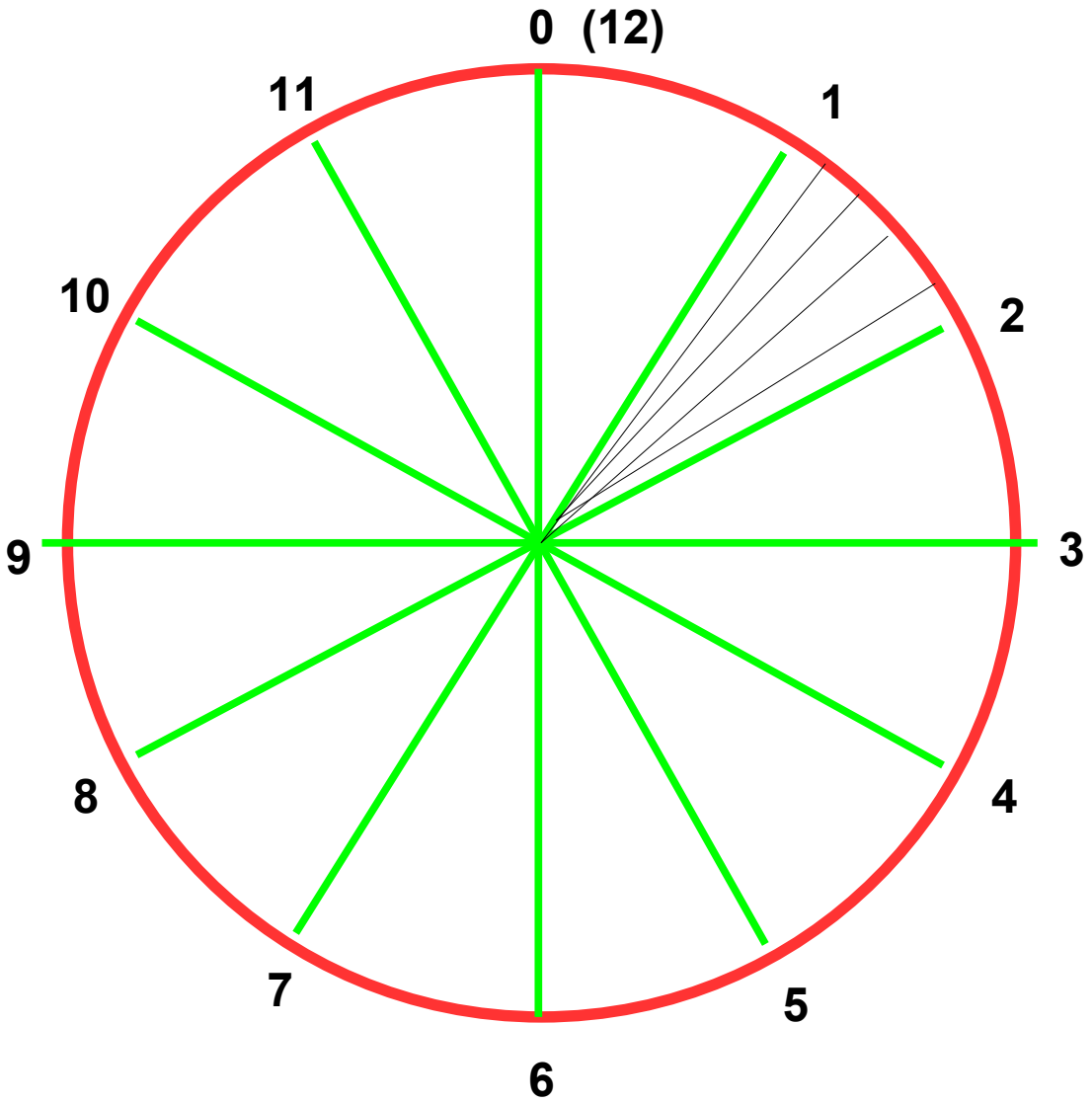


The 12 numbers on the face of the clock divide it into 12 sectors.

Each sector corresponds to an angle of **30°**

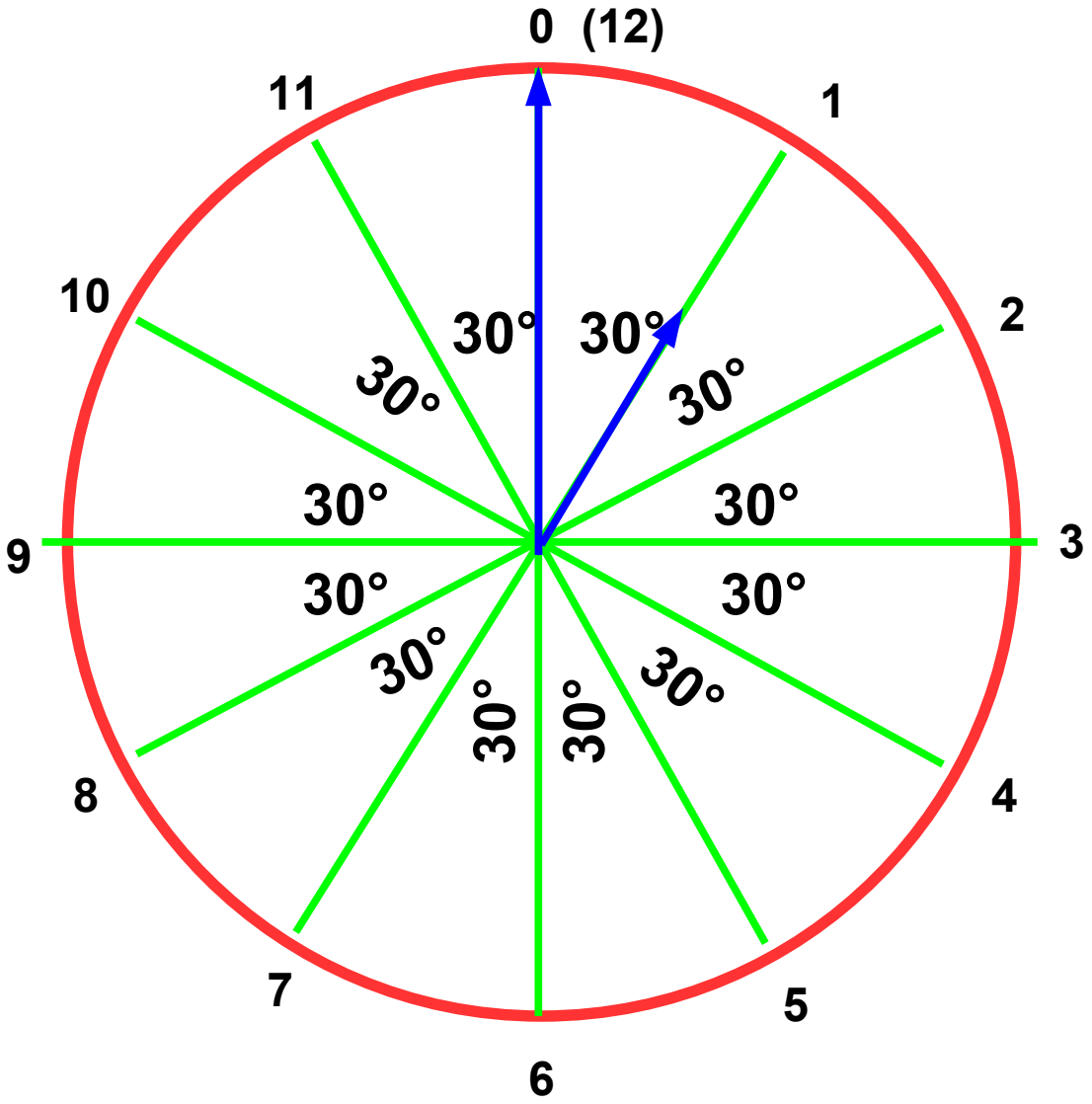
It totally adds upto **360°**



We know that each sector is divided into “5 minutes”

So we have 5 small sectors in each of the sector as shown alongside.

Each of these little sectors corresponds to 6°



The angle between the minute hand and the hour hand is 30° when the time is 1 o'clock

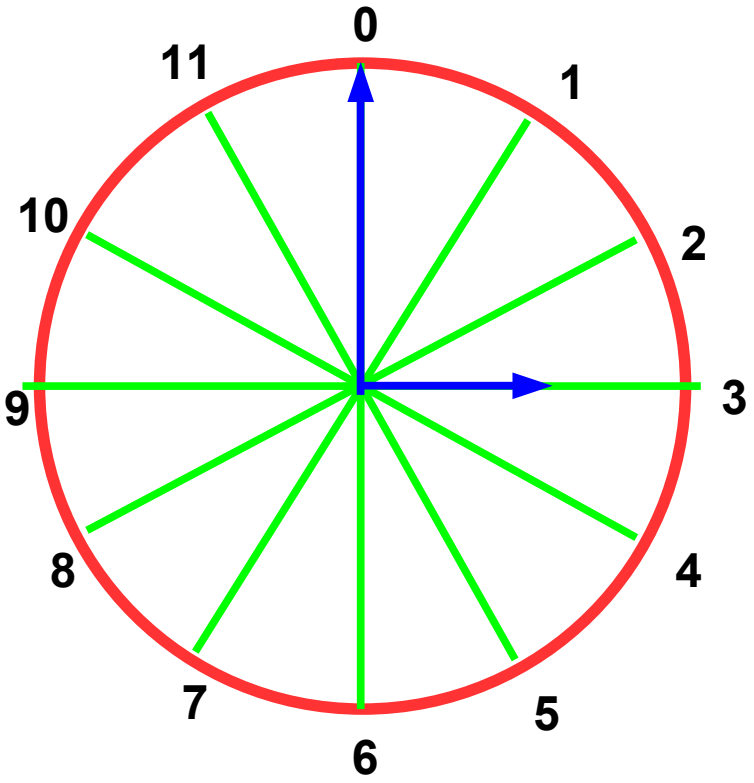
The angle between the minute and the hour hand is 60° when the time is 2 o'clock

What is the angle between the minute hand and the hour hand if the time is 3:15 am ?

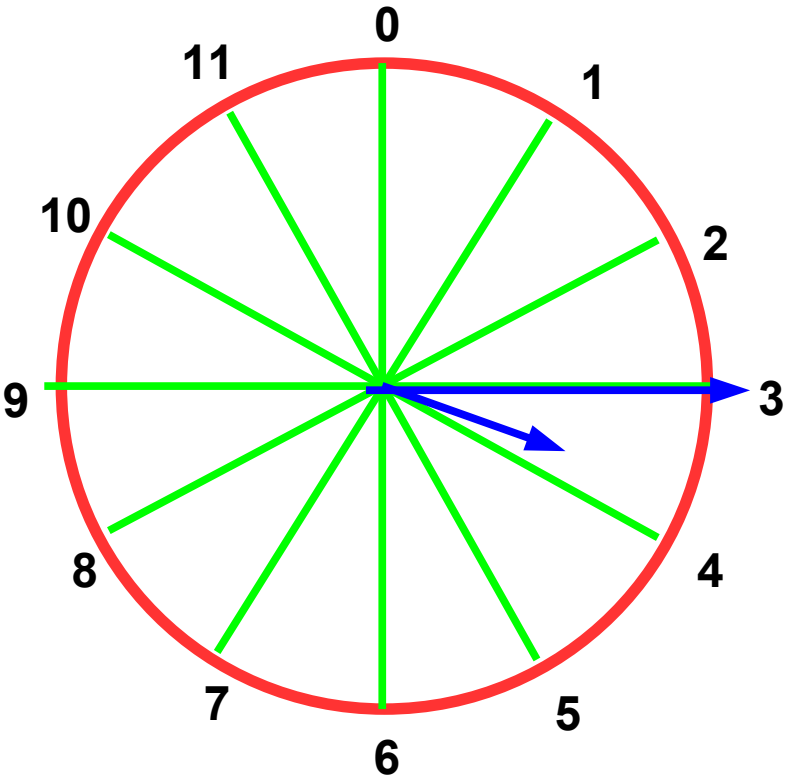
If your answer to the previous question to the previous question is 0° then you need to pay attention to the next set of slides !!!

The Minute hand covers 360° in 60 minutes or 1 hour

The Hour hand covers 30° in 60 minutes or 1 hour



The hands at 3am



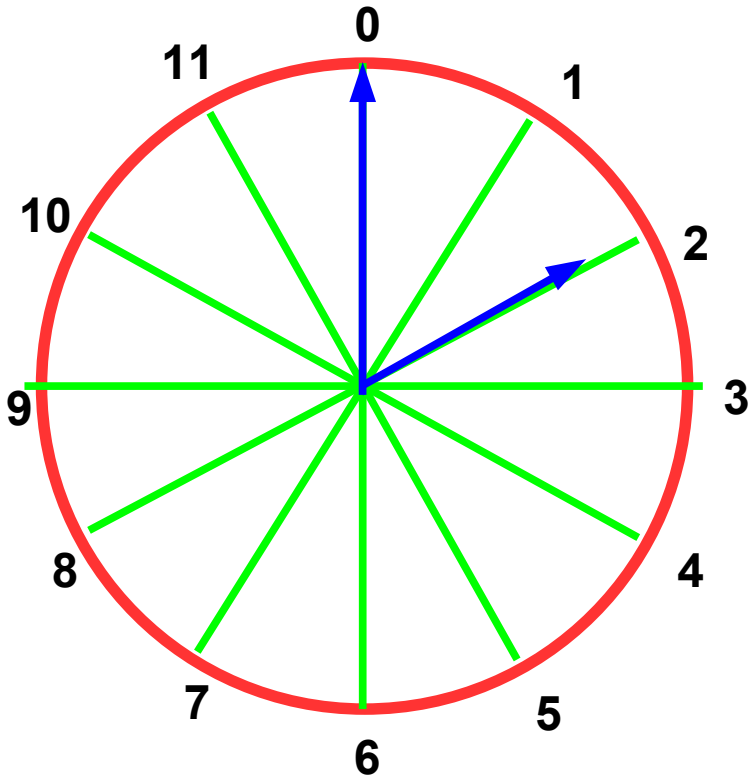
The hands at 3:15 am

In 15 mins, how many degrees does the hour hand cover ?
In 60 mins, the hour hand covers 30°
In 15 mins, the hour hand covers 30/4 = 7.5°
The angle between the hour hand and the minute hand at 3:15 am is 7.5°

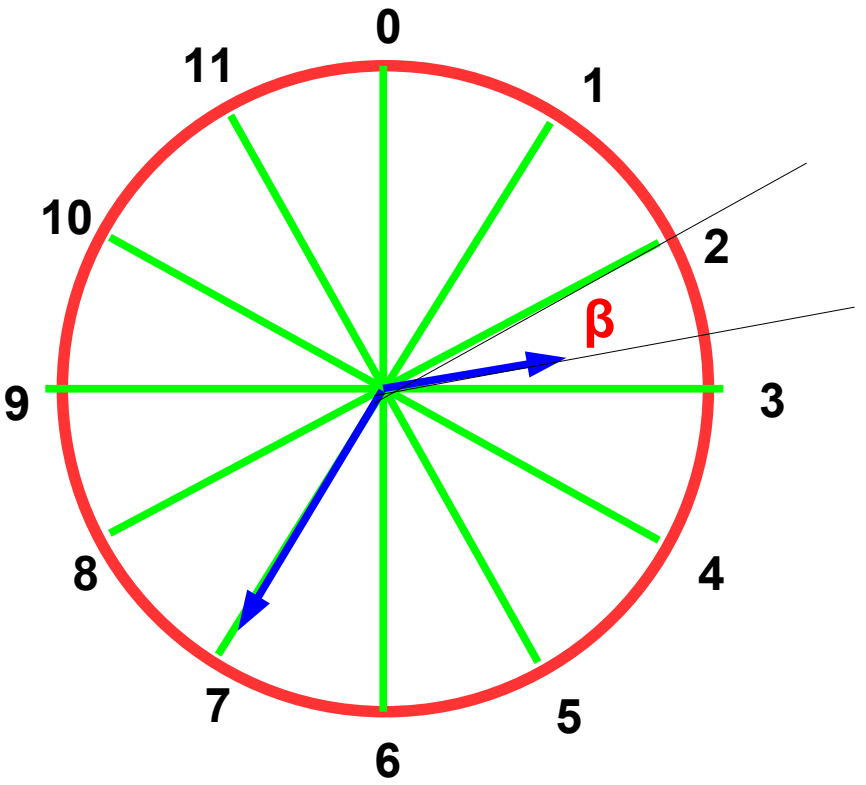
What is the angle between the minute hand and the hour hand if the time is 2:35 am ?

The Minute hand covers 360° in 60 minutes or 1 hour

The Hour hand covers 30° in 60 minutes or 1 hour



The hands at 2am



The hands at 2:35 am

In 35 mins, how many degrees does the hour hand cover ?
In 60 mins, the hour hand covers 30°
In 35 mins, the hour hand covers 35x30/60 = 35/2 ° = **β**
The angle between the hour hand and the minute hand
at 2:35 am is (30 x 5 - β) = 150 – 17.5 = 132.5°

Quiz

1. The Second hand of a clock covers 180º in **0.5** minutes
2. The minute hand of a clock covers 90º in __**15**__ minutes
3. The hour hand of a clock covers __**7.5**__º in 15 minutes
4. The hour hand of a clock covers 30º in ___**60**___ minutes
5. The minute hand of a clock covers 120º in __**20**___ minutes
6. What is the angle between the minute hand and the hour hand when the time is 6 am ? **180**
7. What is the angle between the minute hand and the hour hand when the time is 6:15 am ? **--97.5 deg [30*3 + 7.5] where 7.5 deg - angle traversed by hours in 15 min**
8. What is the angle between the minute hand and the hour hand when the time is 6:30 am ?**15**
9. What is the angle between the minute hand and the hour hand when the time is 6:45 am ?-- **67.5 deg [30*3-22.5] where 22.5 =7.5*3**
10. What is the angle between the minute hand and the hour hand when the time is 6:52 am ?

Here the minute hand moves 6deg in 1 minute. So 12 deg in 2 minutes .
Also the hour hand would move an angle of 26 deg in 52 minutes [(30 * 52)/60] == 26 deg
So, at 6:52 am angle formed would be [(30*4 + 12{min--hand}) - 26{hour -- hand}] = 106 deg