Class 3 Geometry: 几何

How to calculate Area

- Area of a Rectangle
- Area of a Square
- Area of Triangle
- Area of Parallelogram
- Area of Trapezoid
- Area of Circle
- Area of irregular shapes
- Area of Rectangular Triangle

Other important parameters about a shape

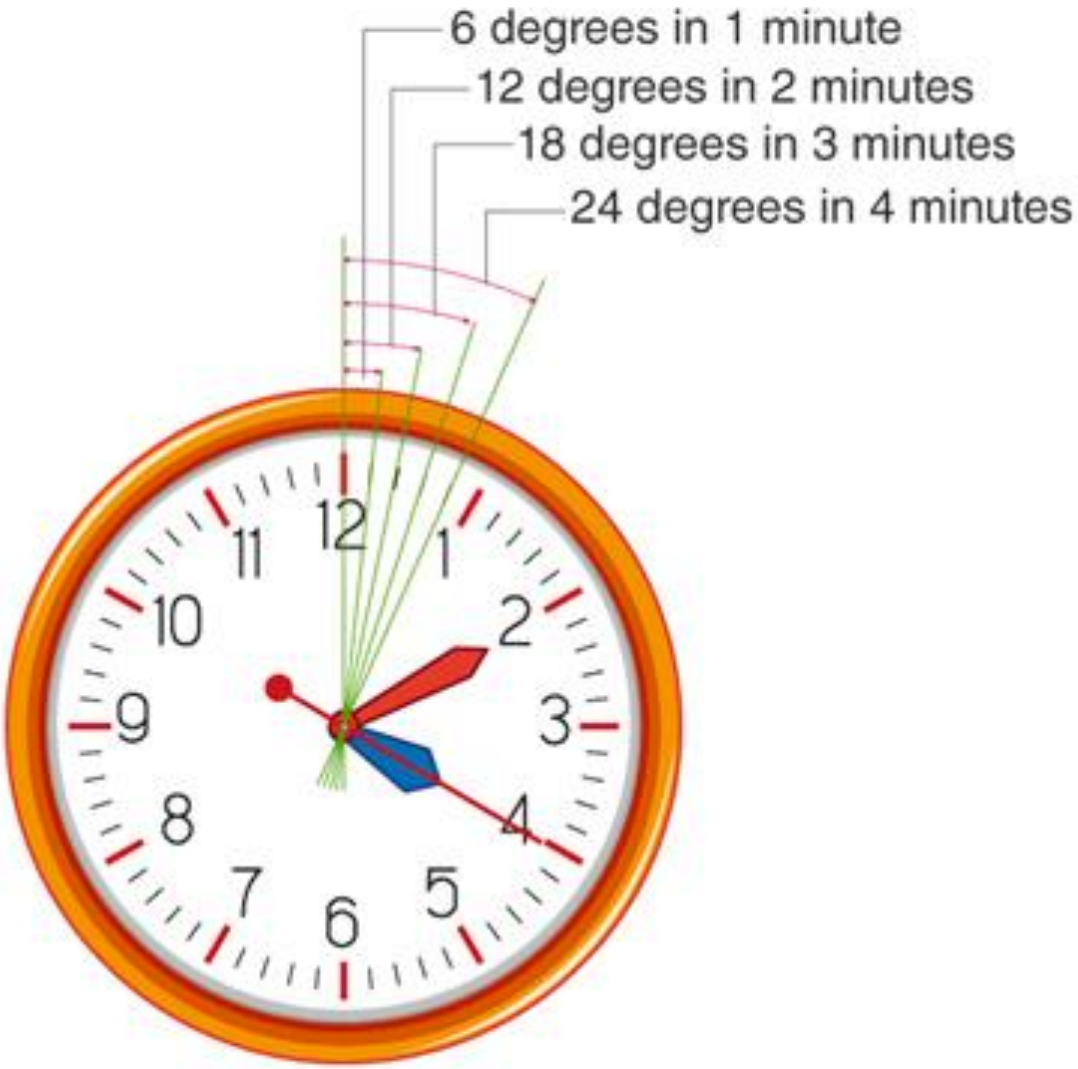
- A circle: radius, diameter, 360 degrees
- A triangle:
- A square
- A parallelogram
- A trapezoid

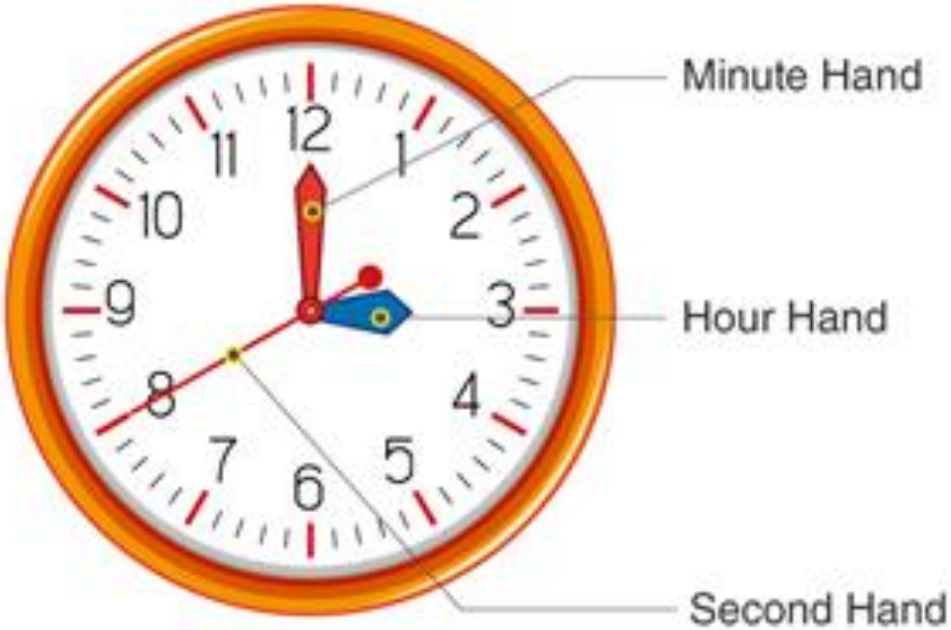
Today we focus on Circles

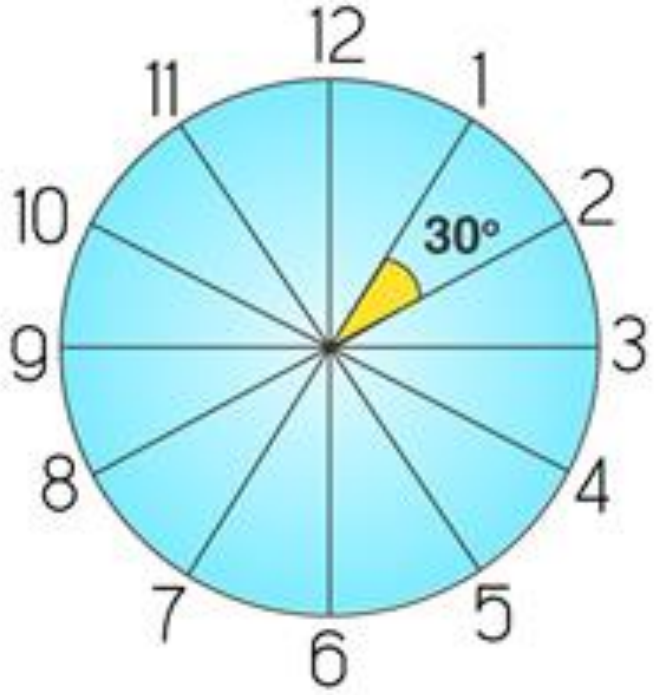
Circles

- **Circle basics**
- **Arc measure**
- **Arc length (from degrees)**
- **Introduction to radians: one radian is the angle subtended at the centre of a circle by an arc that is equal in length to the radius.**
- **Arc length (from radians)**
- **Sectors**
- **Inscribed angles**
- **Inscribed shapes problem solving**
- **Properties of tangents**
- **Standard equation of a circle:** $(x-h)2+(y-k)2=r2$ where (h,k) is the **center** of the circle and r is the **radius** of the circle
- **Expanded equation of a circle: not for Grades 4-6**
- **Constructing regular polygons inscribed in circles**
- **Constructing circumcircles & incircles**
- **Constructing a line tangent to a circle**

Clock Problems







The angle between any two consecutive divisions = (360°)/12= 30°

Speed of the hands

Speed = Distance/(Time taken)

The speed of a minute hand:
A minute hand travels ***360°*** in one hour. i.e. it travels through all the ***12*** divisions around the clock every hour. *(1 hour = 60 minutes)*
Speed of a minute hand = (360°)/(60 minutes)
Speed of a minute hand = 6° per minute.

The speed of an hour hand:
An hour hand travels 30**°** in an hour. i.e. it covers a distance of 5 minutes (the gap between consecutive divisions) in 60 minutes.
Speed of an hour hand = (30°)/(60 minutes)
Speed of an hour hand =1/2 ° per minute.

How about second hand?