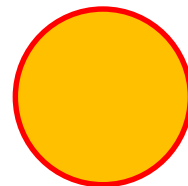




THEME: GEOMETRY AND MEASURES

TOPIC: CIRCLE PROPERTIES

KAZIBA STEPHEN



6th January 2025

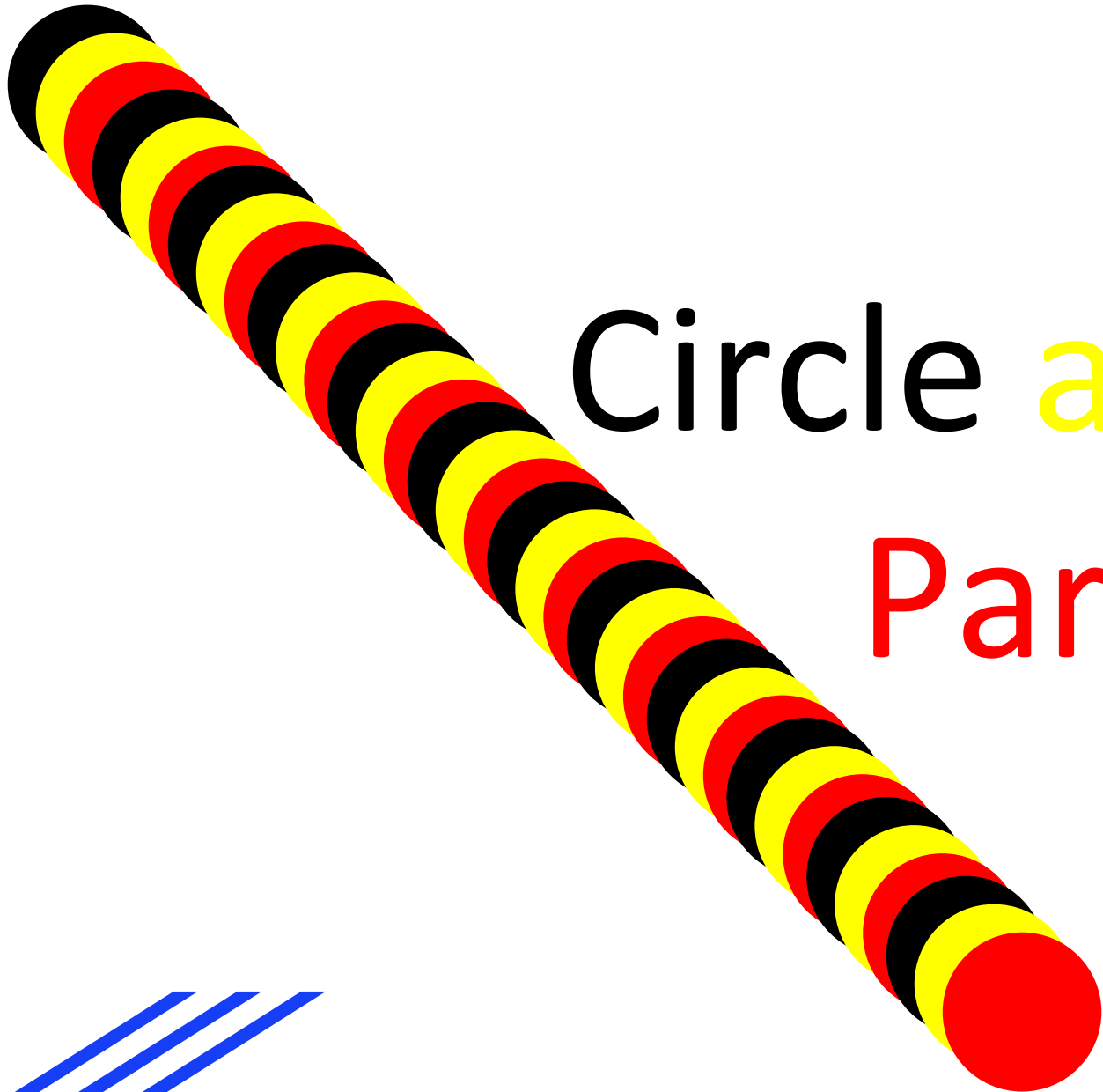
Competency

- Learners should be able to understand and use circle properties to solve problems.

LEARNING OUTCOME

- By the end of this lesson you should be able to identify an arc, chord, sector and segment.

Circle and its Parts



CIRCLES IN DAILY LIFE



A CIRCLE

CIRCLE IN SPORTS



A CIRCLE

CIRCLE IN FOOD INDUSTRY



A CIRCLE



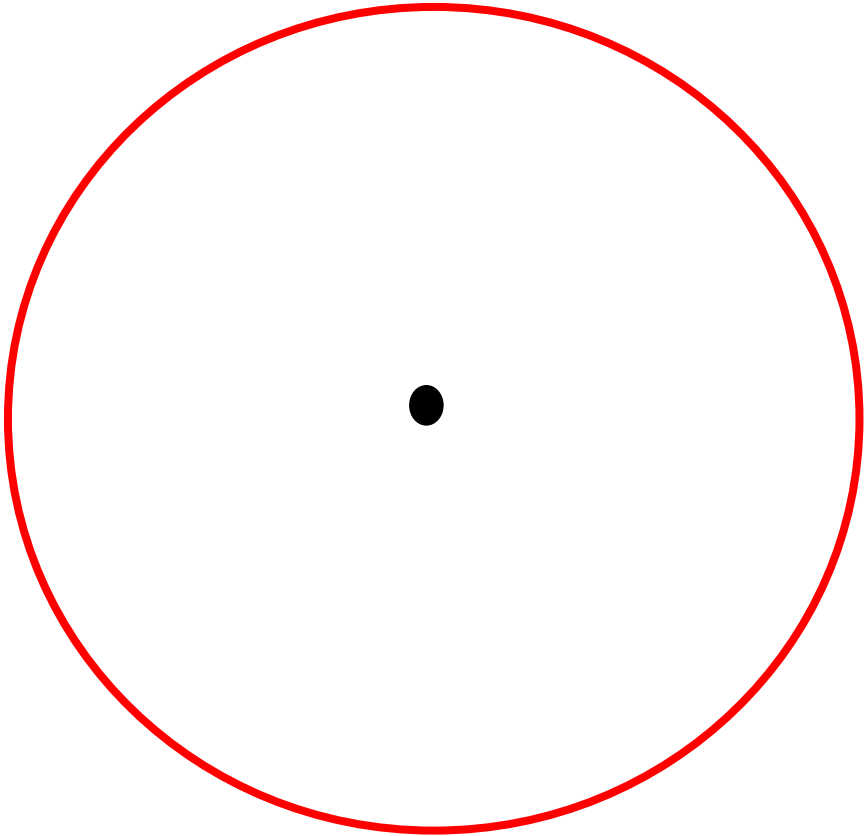
CIRCLE IN MUSIC



A CIRCLE



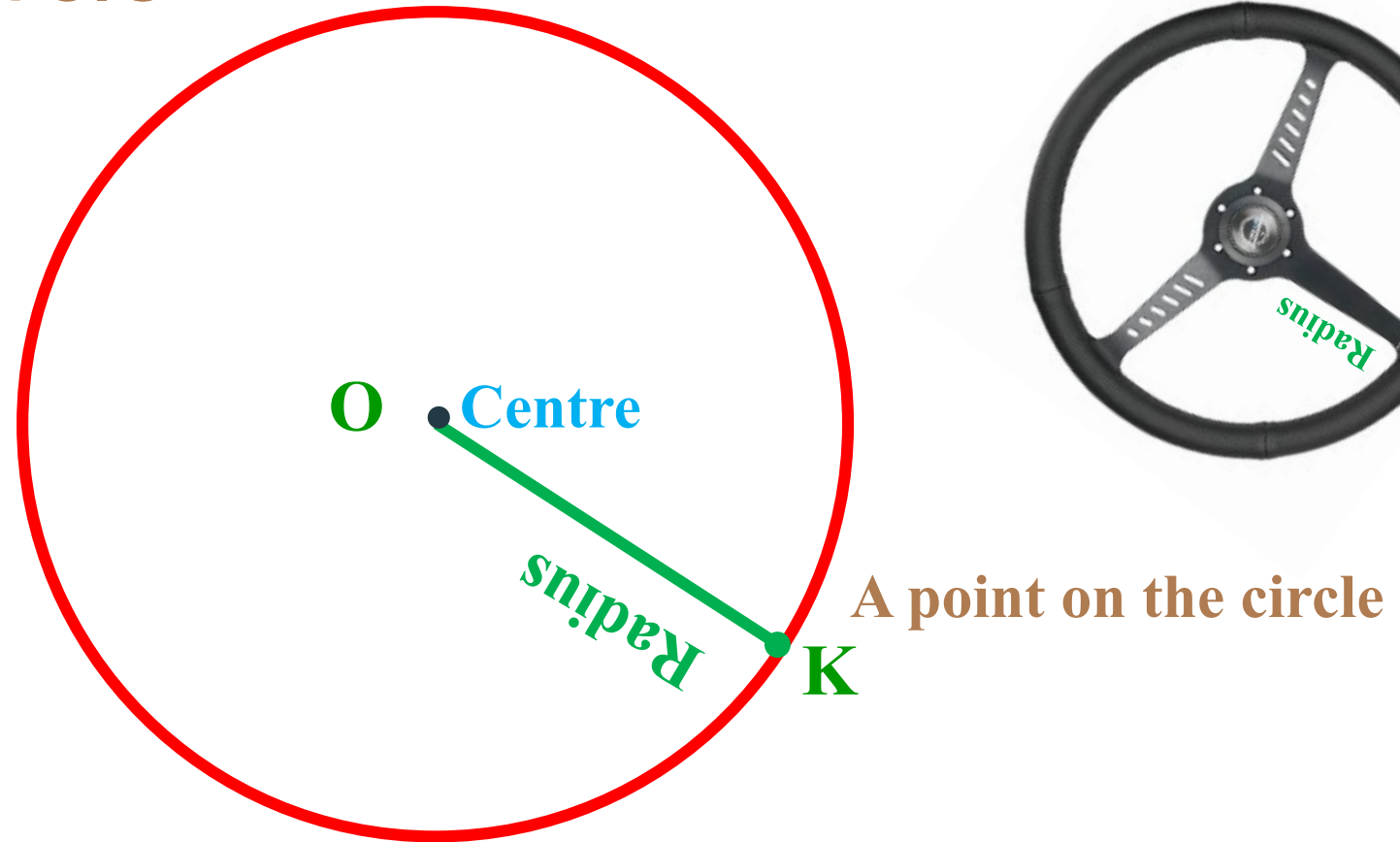
What is a Circle



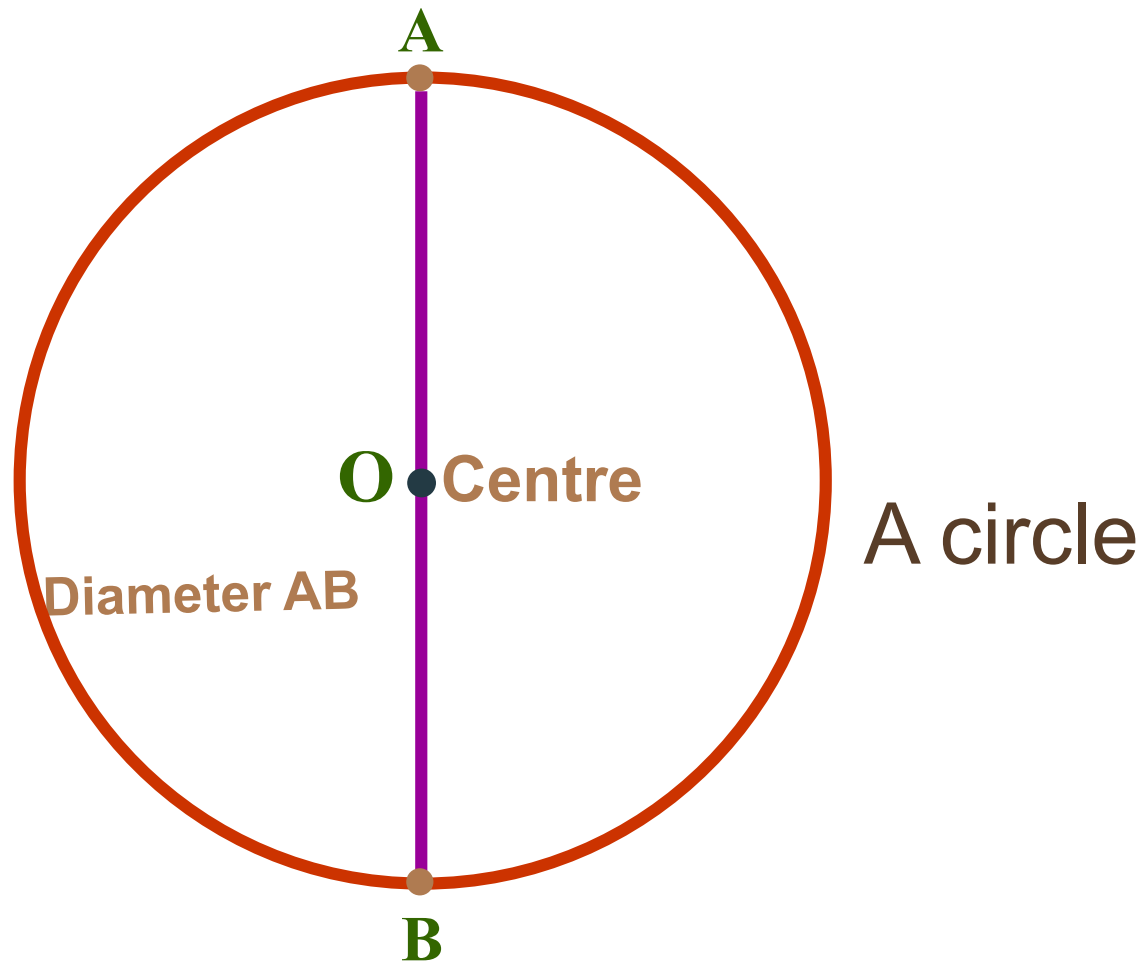
A circle is a closed two-dimensional figure in which the set of all the points in the plane is equidistant from a given point called “centre



Parts of the Circle



A line segment that joins any point on the circle to its centre is called a radius.

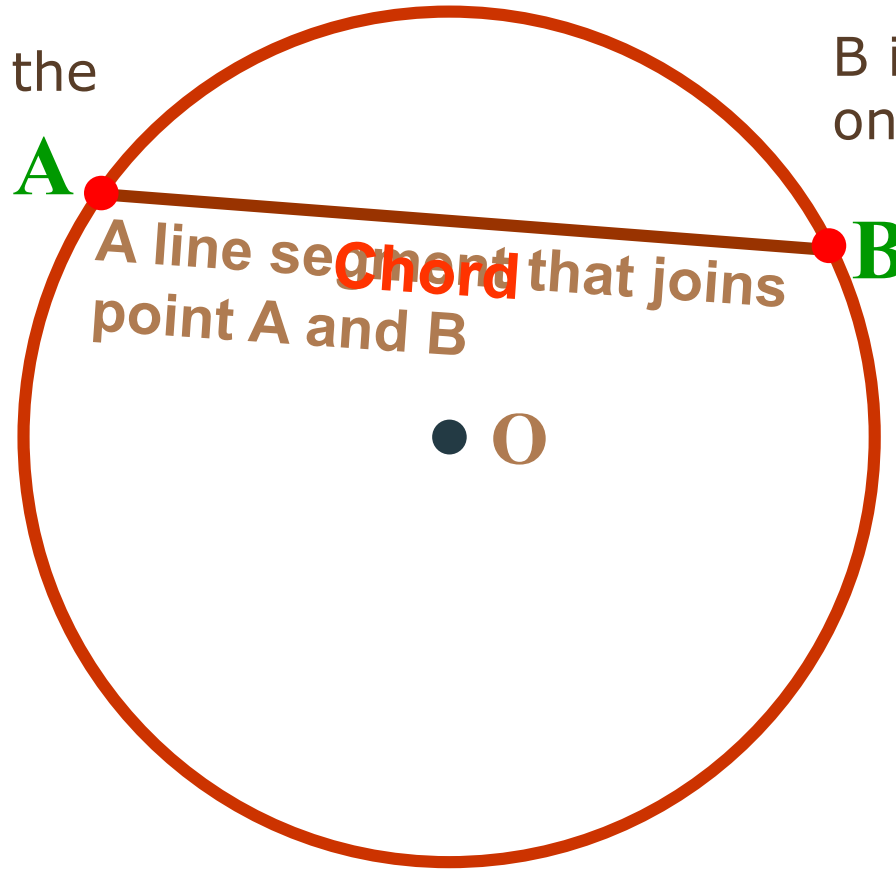


A line segment that joins any two points on the circle and passes through its centre is called a diameter.



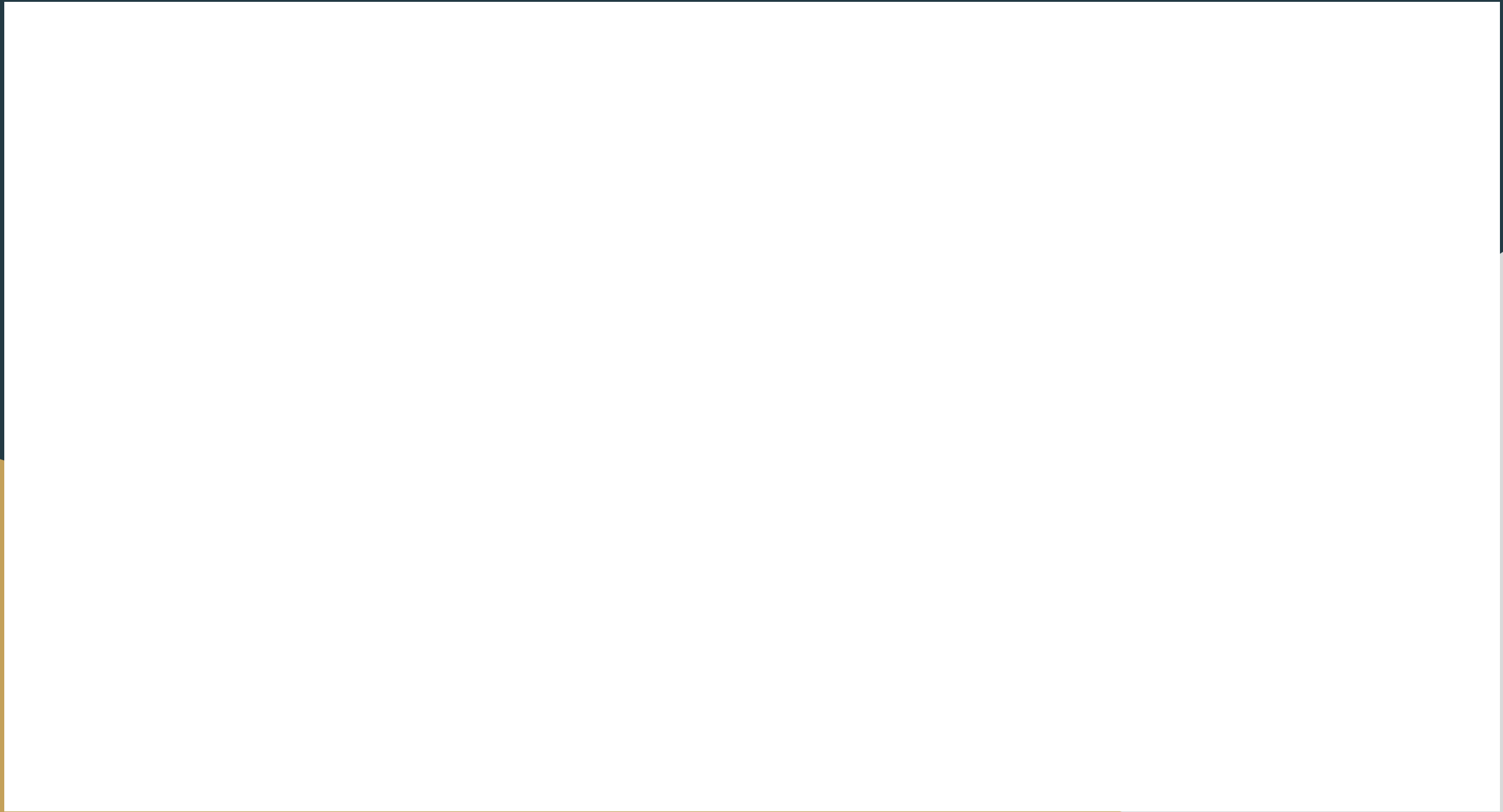
A is a point on the circle

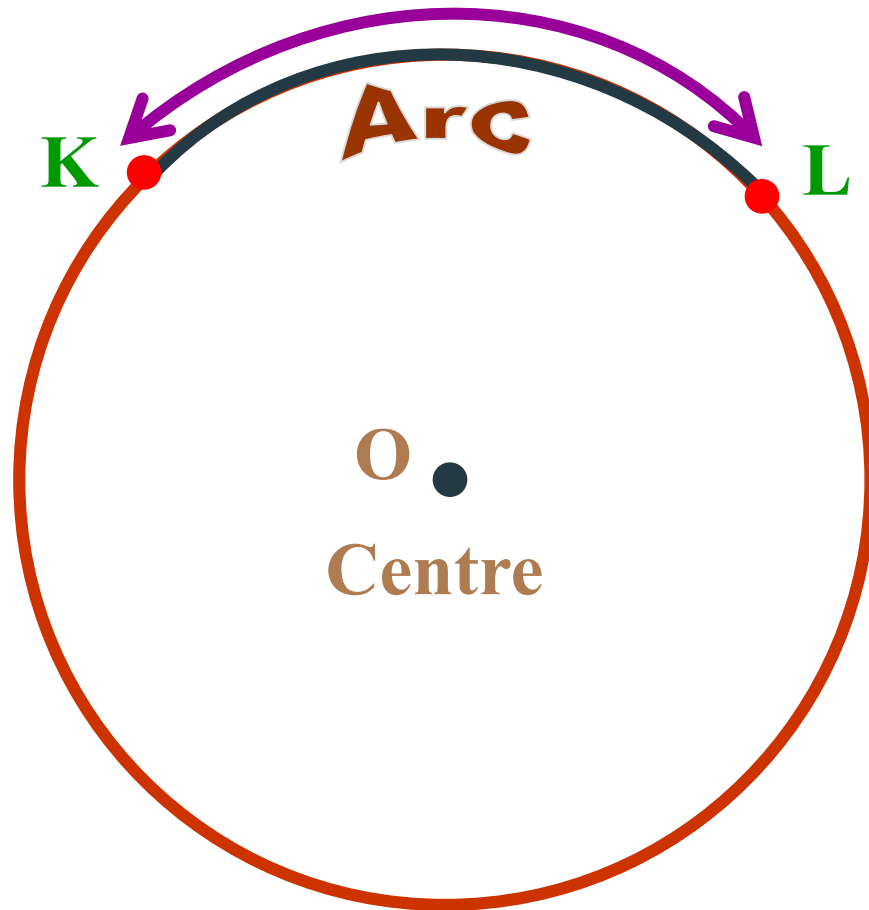
B is another point on the circle



A line segment that joins point A and B

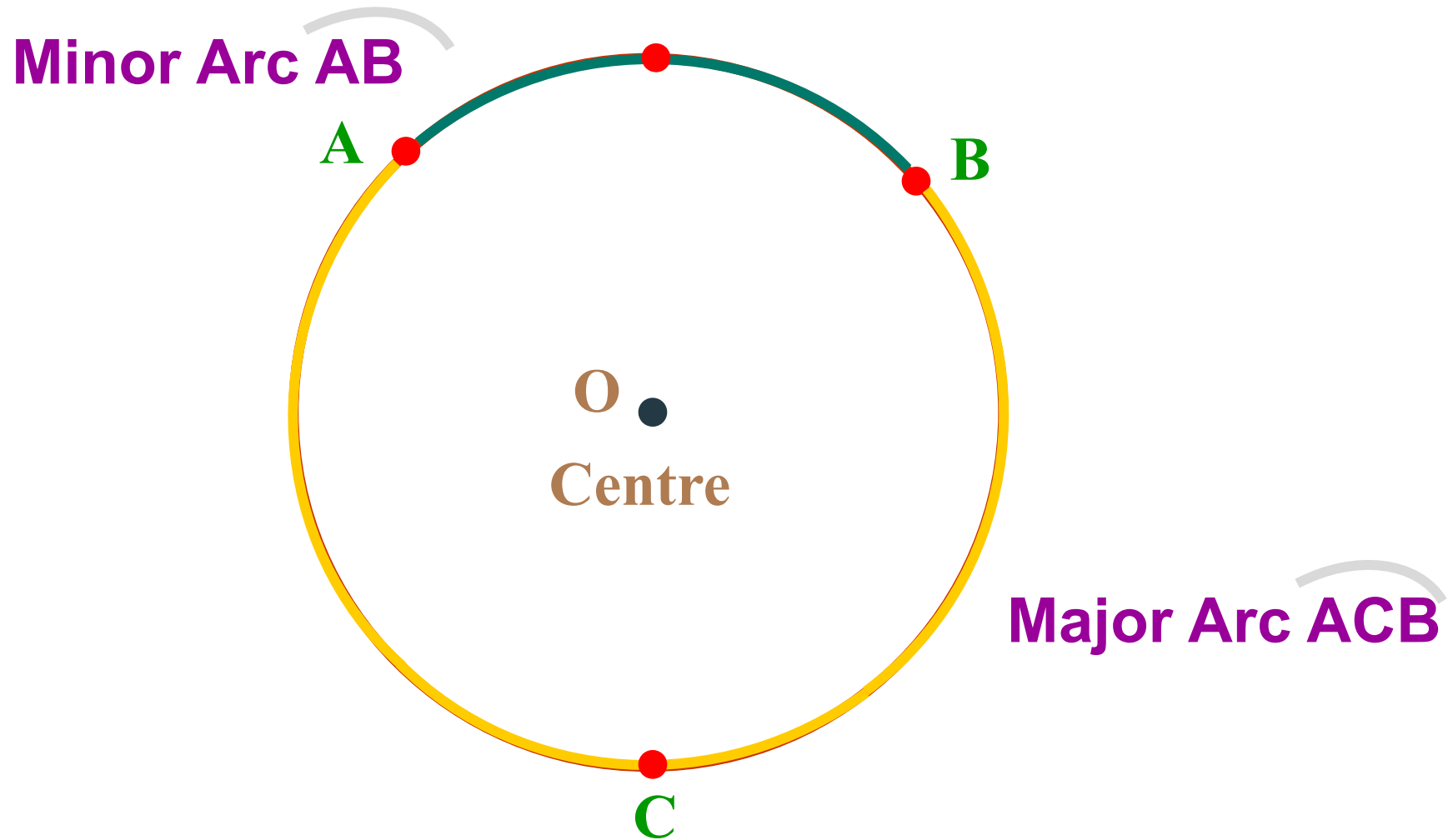
A line segment that joins any two points on the circle is called a **chord**.





An **arc** is the distance between any two points on the circumference of a circle.

(Contd...)



An arc divides the circle into two parts: the smaller arc is called the **minor arc**, the larger one is called the **major arc**.

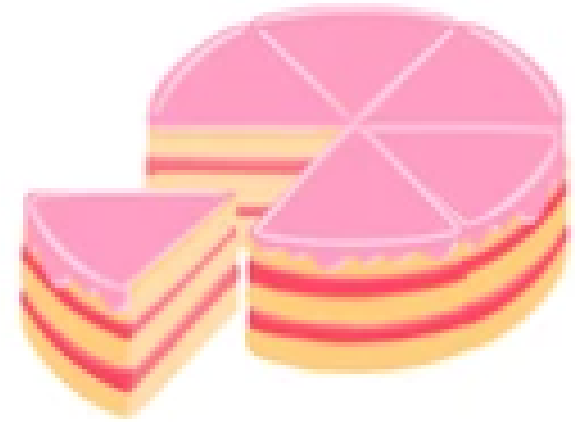


An arc

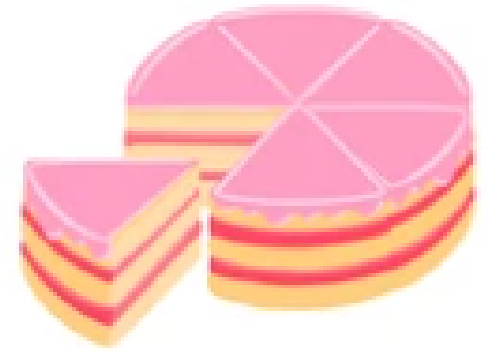
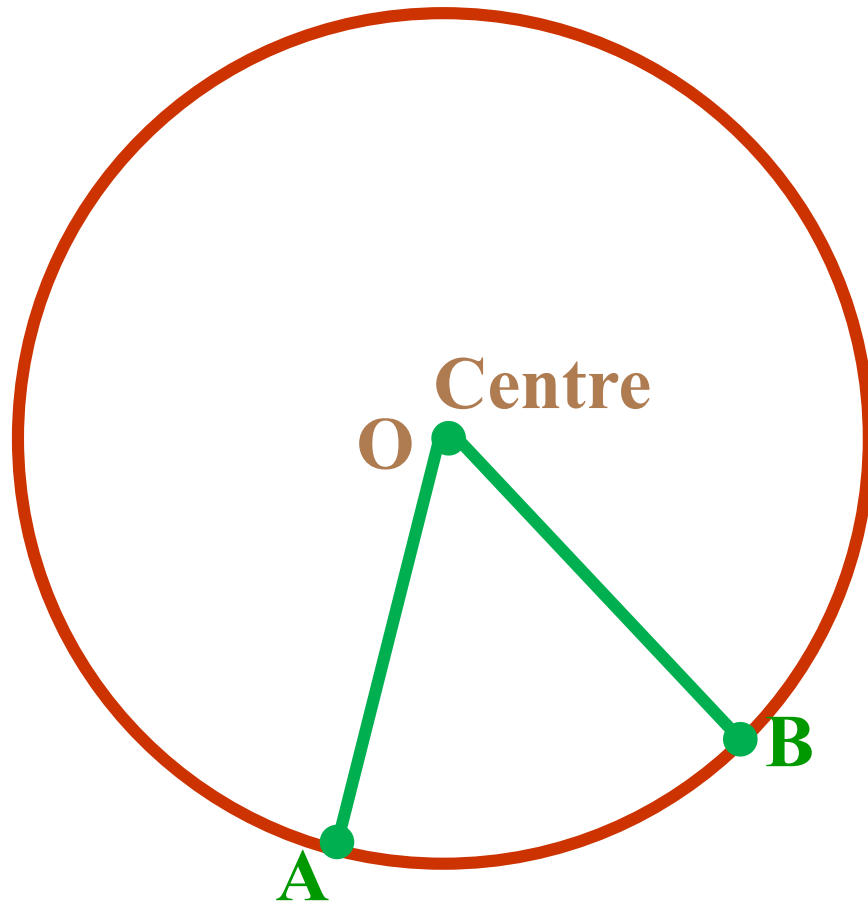
An arc

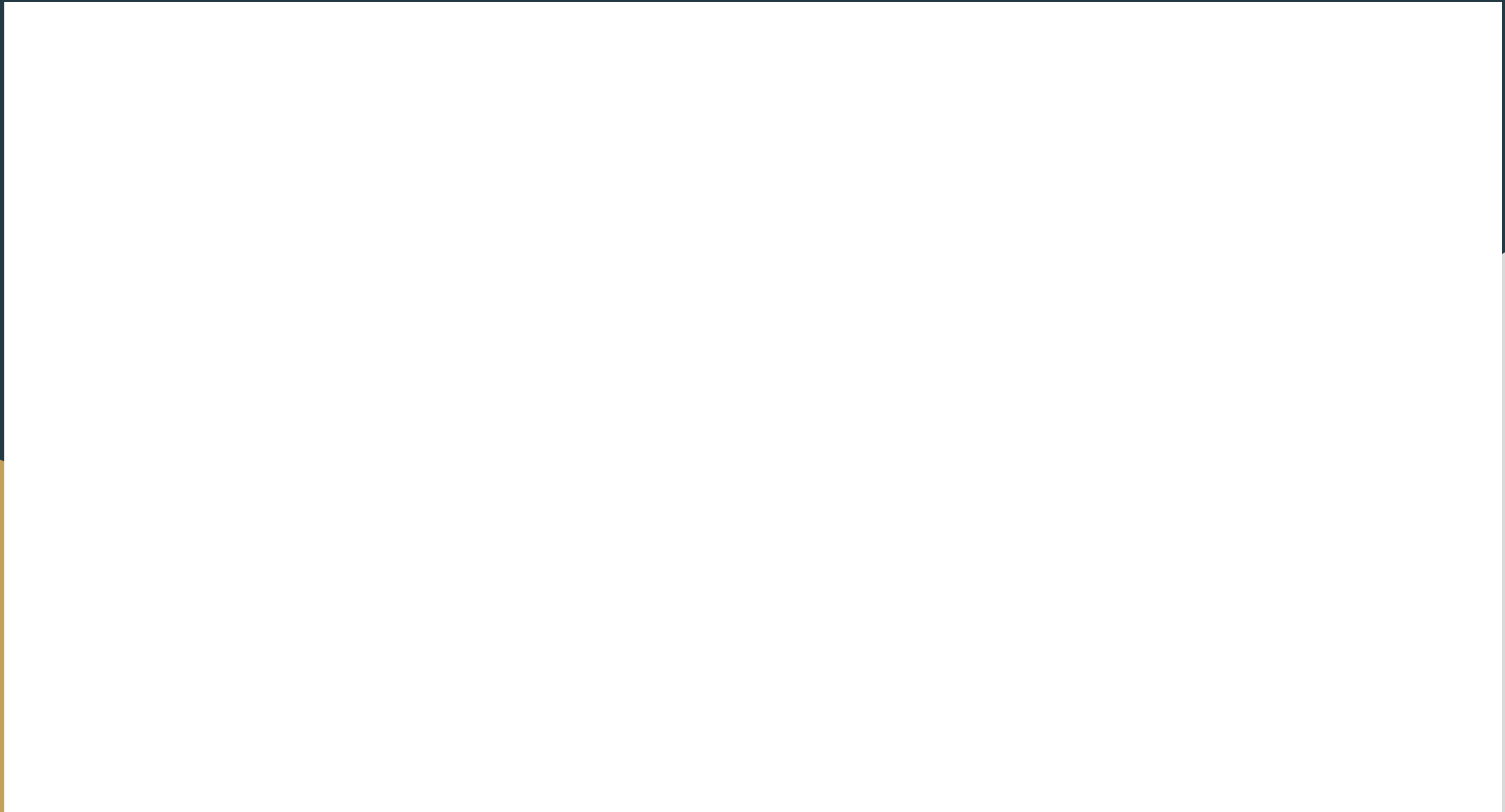
ACTIVITY

- Have you ever split a pizza, a pie or a cake to share with someone
- How do you call the shared part?
- What about the part that remains?

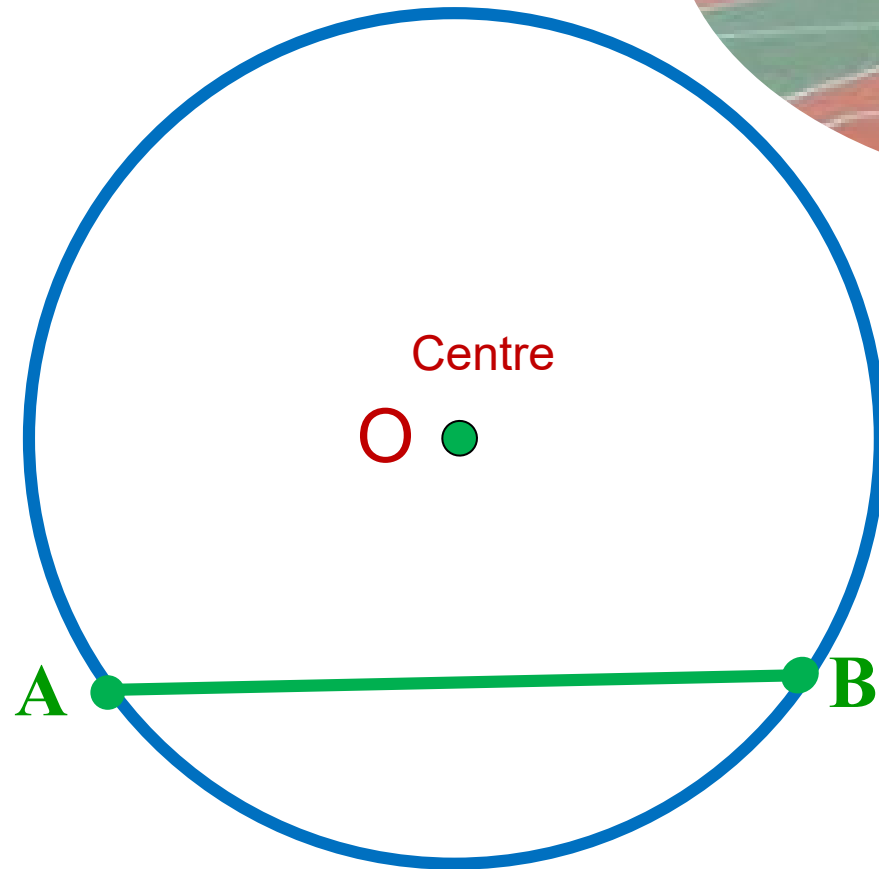


SECTOR

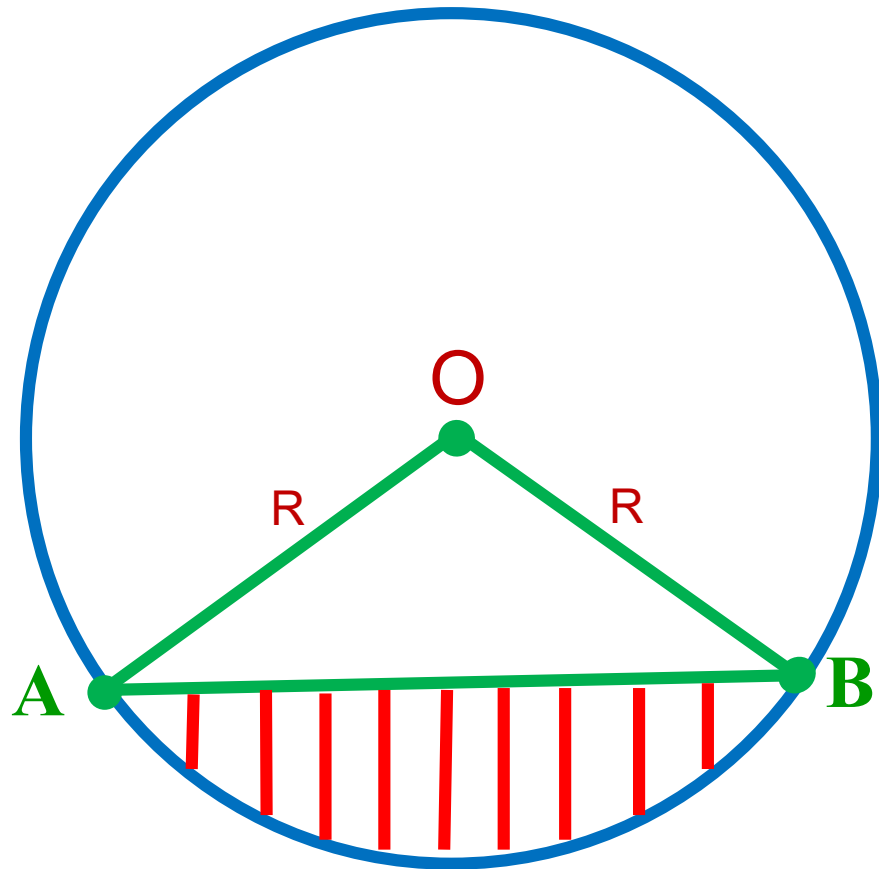




SEGMENT



Summary



*(i) **AB** is called an arc*

*(ii) **OAB** is called a sector*

*(iii) line **AB** is called a chord*

Summary

- Radius is a line segment that connects the centre of the circle to any point on its circumference.
- Diameter of a circle is the distance from one side to the other, passing through the centre. It is twice the length of the radius.
- A chord is a line segment that connects two points on the circle's circumference. The longest chord in a circle is the diameter.

Fields that employ circles

- **Engineering** – Gears, wheels, pulleys, and structural designs.
- **Architecture** – Symmetry, proportions, domes, and arches.
- **Art** – Visual inspiration, composition, and design.
- **Food Industry** – Packaging, cooking, and food presentation.
- **Automotive Industry** – Tires, wheels, and braking systems.
- **Aerospace** – Satellite design, flight instruments, and orbits.
- **Physics and Astronomy** – Orbits, rotation, and telescopes.
- **Sports** – Track and field, sports balls, and racing.
- **Manufacturing** – Saw blades, tools, and printing.
- **Technology and Electronics** – Gadgets, speakers, and microphones.
- **Healthcare** – Medical imaging, surgical tools, and instruments.