

TOPIC: VERIFICATION OF ALTERNATE SEGMENT THEOREM

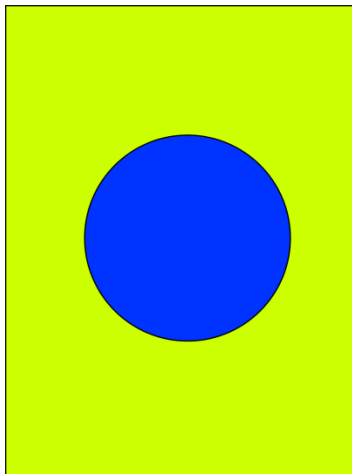
OBJECTIVE: To verify that: If a line touches a circle and from the point of contact a chord is drawn, the angles between the tangent and the chord respectively are equal to the angles in the corresponding alternate segments.

MATERIALS REQUIRED:

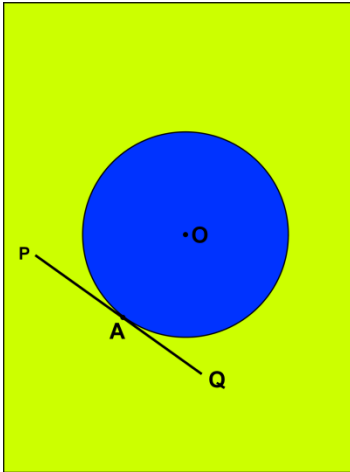
1. Geometry box
2. Practical workbook
3. Coloured chart papers – yellow, blue and red
4. Scissors
5. Scale
6. Sketch pen
7. Adhesives or glue sticks
8. Tracing papers – 2

PROCEDURE:

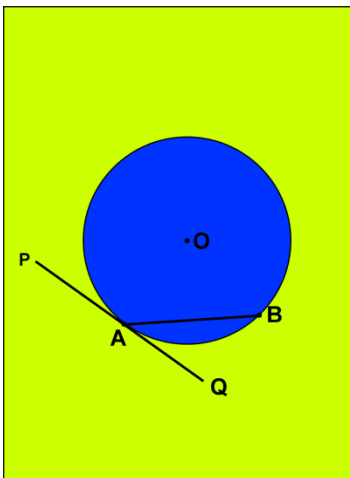
1. Draw a circle of 5 cm radius on a blue coloured chart paper. Use black sketch pen for drawing.
2. Cut out the circle.
3. Take a yellow chart paper. Cut it in the size of an A4 sheet and paste the circle on it.



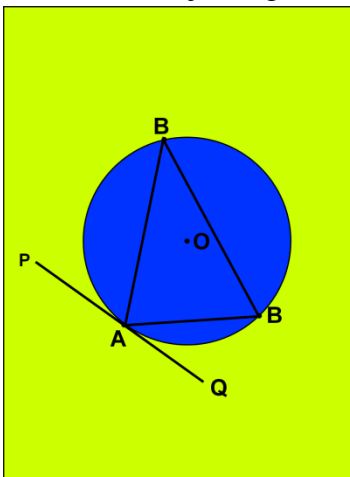
4. Fold the sheet in such a way that it just touches the circle at A. Unfold the paper and draw the tangent PQ.



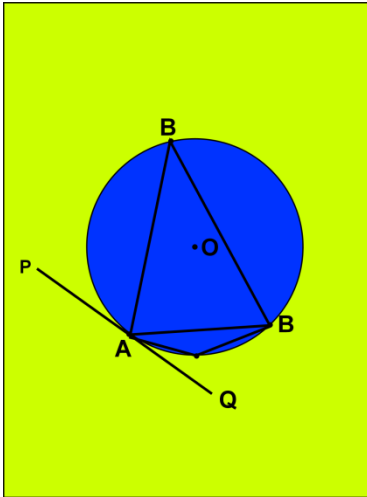
- Fold the paper starting from A such that the chord AB is obtained. Draw AB.



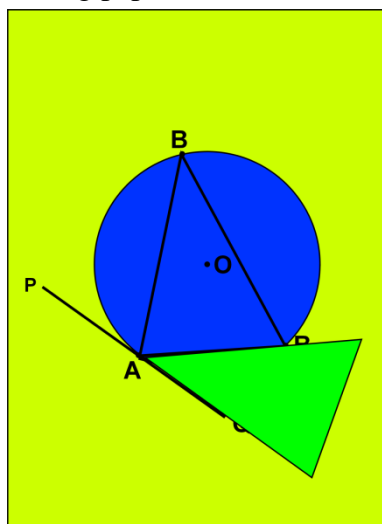
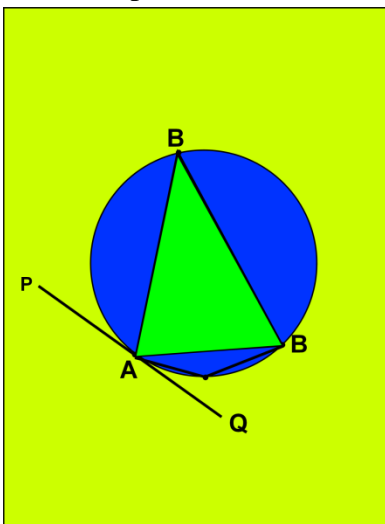
- $\angle BAP$ and $\angle BAQ$ are the angles formed between the chord AB and the tangent PQ.
- Take a point C on the major arc. Form a crease joining AC. Draw AC.
- Form a crease joining BC. Draw BC.



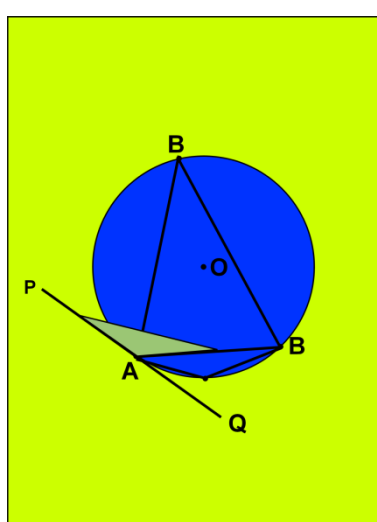
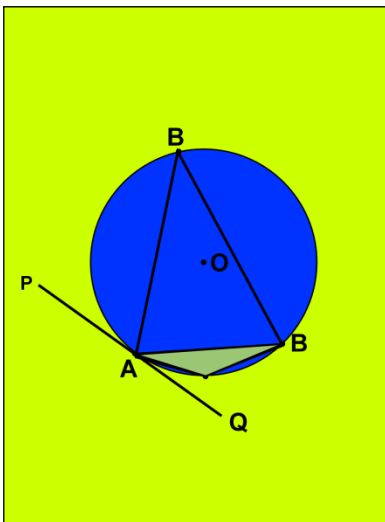
- Take a point D on the minor arc. Form a crease joining AD. Draw AC.
- Form a crease joining BD. Draw BD.



11. Make a replica of $\angle ACB$ using a tracing paper. Place it on $\angle BAQ$.



12. Make a replica of $\angle BDA$ using a tracing paper. Place it on $\angle BAP$.



RESULT:

It is noted that $\angle BAP$ and $\angle BAQ$ are the angles formed between the chord AB and the tangent PQ..

$\angle BAQ$ is completely covered with $\angle ACB$ and $\angle BAP$ is completely covered with $\angle ADB$. Thus the theorem is verified.

LAST DATE OF SUBMISSION OF PROJECT: 28th November, 2014

TOPIC: ANGLES IN THE SAME SEGMENT OF A CIRCLE ARE EQUAL

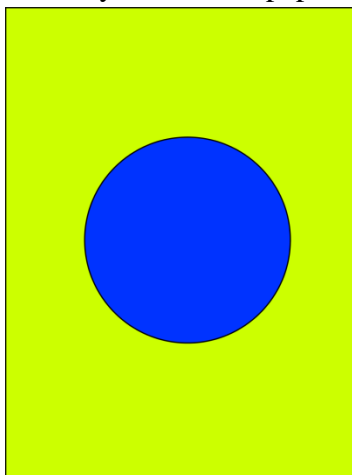
OBJECTIVE: To verify that the angle in the same segment of a circle are equal using the method of cutting, pasting and folding.

MATERIALS REQUIRED:

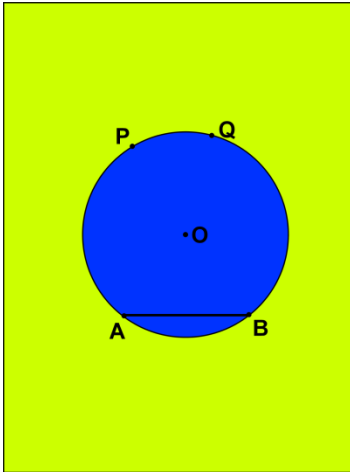
1. Geometry box
2. Practical workbook
3. Coloured chart papers – yellow, blue and red
4. Scissors
5. Scale
6. Sketch pen
7. Adhesives or glue sticks
8. Tracing papers – 2

PROCEDURE:

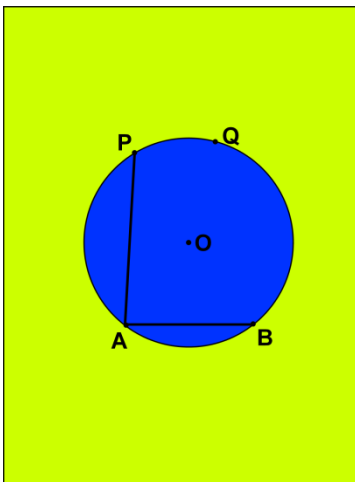
1. Draw a circle of 5 cm radius on a blue coloured chart paper. Use black sketch pen for drawing.
2. Cut out the circle.
3. Take a yellow chart paper. Cut it in the size of an A4 sheet and paste the circle on it.



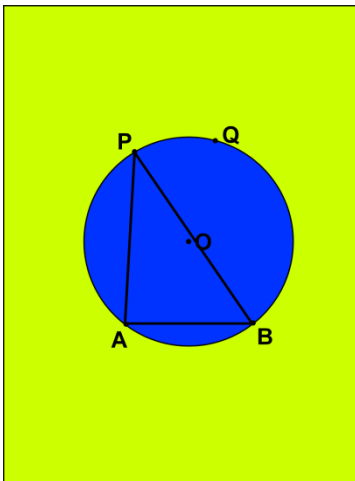
4. Fold the circle in any way such that a chord is made. Draw the line segment AB.
5. Take two points P and Q on the circle in the same segment.



6. Form a crease joining AP. Draw AP.



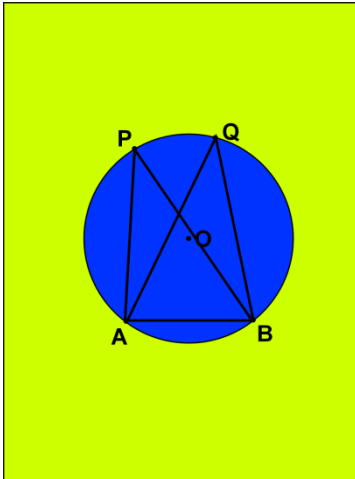
7. Form a crease joining BP. Draw BP.



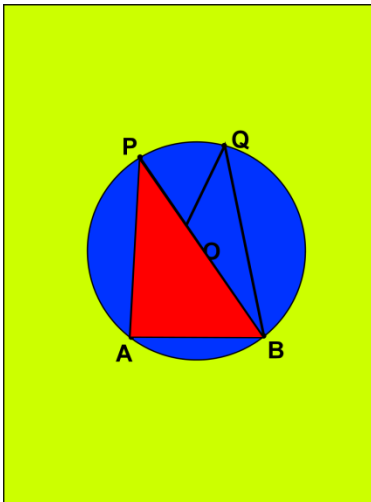
8. $\angle APB$ is formed in the major segment.

9. Form a crease joining AQ. Draw AQ.

10. Form a crease joining BQ. Draw BQ.



11. $\angle AQB$ is formed in the major segment.
12. Place tracing paper on the circle and draw a replica of the $\angle APB$ and $\angle AQB$. Prepare two such replicas of $\angle APB$ with green or red chart papers.



13. Place the cutout of $\angle APB$ on $\angle AQB$. Stick the other replica along the edge BQ.

RESULT:

It is noted that $\angle APB = \angle AQB$ and these angles are in the same segment. $\angle APB$ is completely covered with $\angle AQB$ and thus the theorem is verified.

LAST DATE OF SUBMISSION OF PROJECT: 28th November, 2014