PROJECT 2

## 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.
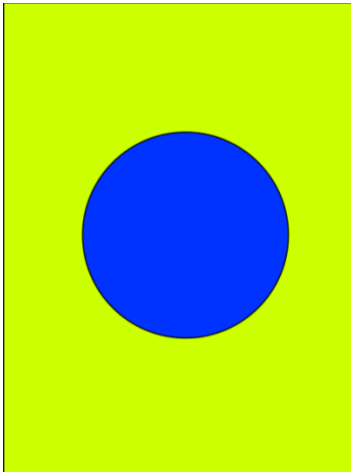
4. Fold the sheet in such a way that it just touches the circle at A. Unfold the paper and draw the tangent PQ.
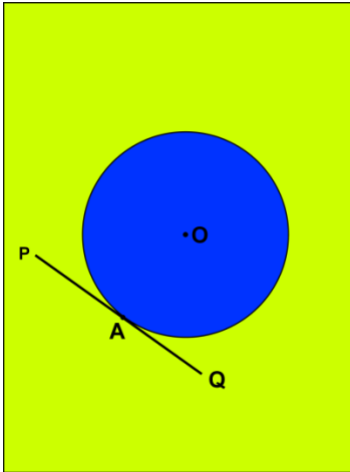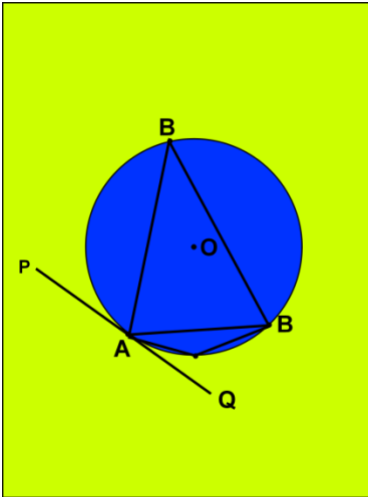
5. Fold the paper starting from A such that the chord AB is obtained. Draw AB.
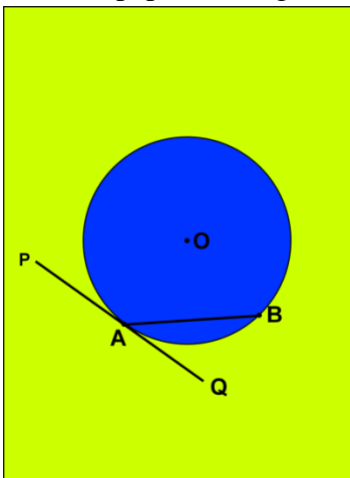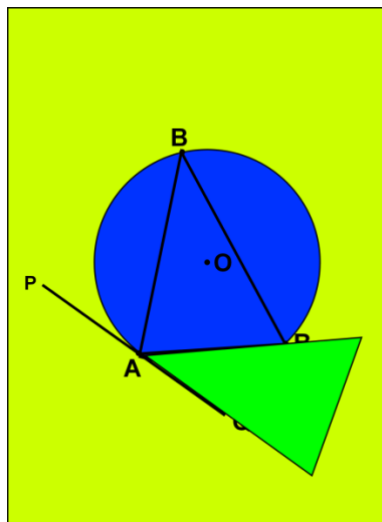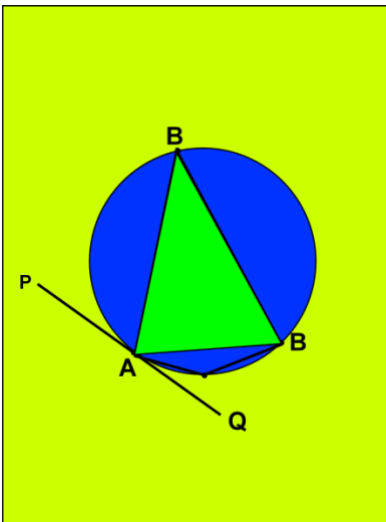

6. $\angle BAP$ and $\angle BAQ$ are the angles formed between the chord AB and the tangent PQ.
7. Take a point C on the major arc. Form a crease joining AC. Draw AC.
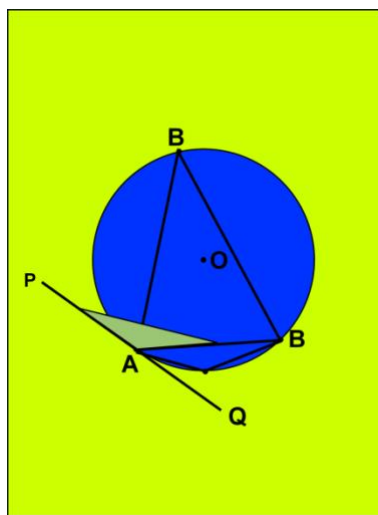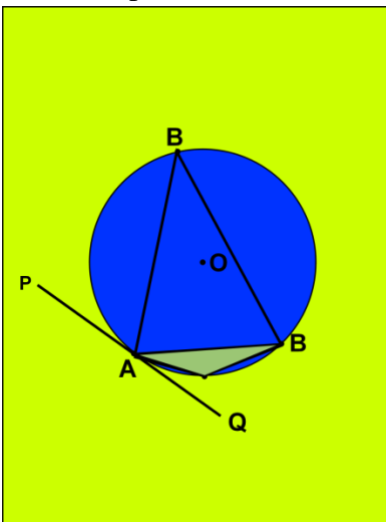8. Form a crease joining BC. Draw BC.
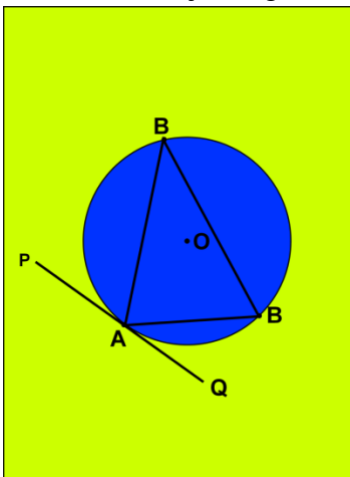
9. Take a point D on the minor arc. Form a crease joining AD. Draw AC.
10. Form a crease joining BD. Draw BD.

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 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: 23rd December, 2021