RPH Guidelines

BAB 6 Sudut dan Tangen bagi Bulatan
Angles and Tangents of Circles

Content Standards (CS)	Learning Standards (LS)	Questions & Performance Levels (PL)		Pages
6.1 Angle at the Circumference and Central Angle Subtended by an Arc Textbook pages 130 – 143	6.1.1 Make and verify conjectures about the relationships between (i) angles at the circumference, (ii) angles at the circumference and central angle subtended by particular arcs, and hence use the relationships to determine the values of angles in circles.	Q1	PL1	87 - 91
		Q2	PL1	
		Q3	PL1	
		Q4	PL2	
		Q5	PL3	
		Q6	PL3	
		Q7	PL1	
		Q8	PL1	
		Q9	PL2	
		Q10	PL3	
		Q11	PL3	
	6.1.2 Solve problems involving angles in circles.	Q12	PL4	91 - 92
		Q13	PL5	

Teaching Aid	PAK-21	HOTS
Drawing tools, protractor, ruler, paper	Think-Pair-share	Analysing
EMK	**i-THINK**	**Noble Values**
Language Education	…	Diligence

PdPc Ideas

1. By using the drawing tools, each student draws two circles with the free radius measurements. The center of the circle is clearly marked.
2. With the guidance of the teacher, students draw two angles on the circumference of the first circle as well as the angle at the centre and the circumference on the second circle.
3. Using a protractor, students measure the angle on the first circle and also the angle on the second circle. The measuring values are recorded below every circle.
4. In pairs, students discuss the findings and make conclusions from the activity.
5. Class discussions are held and the teacher guides the students to make conclusions about the relationship between the angles at the circumference and the relationship between the angle at the centre and the angle at the circumference.

Content Standards (CS)	Learning Standards (LS)	Questions & Performance Levels (PL)		Pages
6.2 Cyclic Quadrilaterals Textbook pages 130 – 143	6.2.1 Recognise and describe cyclic quadrilaterals	Q14	PL1	94
		Q15	PL1	
	6.2.2 Make and verify conjectures about the relationships between angles of cyclic quadrilaterals, and hence use the relationships to determine the values of angles of cyclic quadrilaterals.	Q16	PL1	95-96
		Q17	PL1	
		Q18	PL2	
		Q19	PL3	
	6.2.3 Solve problems involving cyclic quadrilaterals.	Q20	PL4	97
		Q21	PL5	

Teaching Aid	PAK-21	HOTS
Textbook (page 144), drawing tools, ruler, protractor, paper	Chain line	Analysing
EMK	**i-THINK**	**Noble Values**
Language	…	Co-operation

PdPc Ideas

1. Students and teachers discuss about the cyclic quadrilaterals.
2. Then, each student draws a cyclic quadrilateral.
3. Pupils measure each of the interior angles of a cyclic quadrilateral.
4. Students extend the two sides of the cyclic quadrilateral.
5. Students measure the exterior angles of the cyclic quadrilateral.
6. Students make conclusion about
   (a) the sum of the opposite interior angles in the cyclic quadrilateral.
   (b) the opposite interior angles corresponding to the exterior angles.
7. Students work together to make paper chain. Each paper is written with the features related to the cyclic quadrilateral.

Content Standards (CS)	Learning Standards (LS)	Questions & Performance Levels (PL)		Pages
6.3 Tangents to Circles Textbook pages 130 – 143	6.3.1 Recognise and describe the tangents to circles.	Q22	PL1	98
	6.3.2 Make and verify conjectures about (i) the angle between tangent and radius of a circle at the point of tangency, (ii) the properties related to two tangents to a circle, (iii) the relationship of angle between tangent and chord with the angle in the alternate segment which is subtended by the chord, and hence perform the related calculations.	Q23	PL1	99
		Q24	PL2	
		Q25	PL4	
		Q26	PL4	
		Q27	PL4	
		Q28	PL4	
	6.3.3 Solve problems involving tangents to circles.	S29	PL5	103

Teaching Aid	PAK-21	HOTS
Worksheets, mini whiteboards, marker pens	Three stray, one stay	Analysing, evaluating
EMK	**i-THINK**	**Noble Values**
Language	–	Co-operation

PdPc Ideas

1. Students are divided into several groups.
2. Each group is given an assignment to make a presentation for the topic (i), (ii) or (iii) from question 23 (worksheet) on page 98 and 99 of this workbook.
3. Students discuss in their groups respectively and present the results of the discussion on a mini whiteboard.
4. In three stray, one stay, a group member will stay and act as a teacher to the other group visitors.
5. Other group members will move by bringing their worksheets to get information from other groups.
6. Upon completion, all students gather in their respective groups for a brainstorming session under the teacher's monitoring.
7. Students and teachers make inferences about this activity regarding the tangent to a circle.