

MAT 515: Geometry for Teachers
Problem Set 10

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Problem 1. (5 points)

The vertices of a convex quadrilateral $ABCD$ are on a circle. Compute $\angle ABC + \angle CDA$.

Problem 2. (5 points)

The vertices of a convex pentagon $ABCDE$ are on a circle. Compute

$$\angle ACE + \angle BDA + \angle CEB + \angle DAC + \angle EBD.$$

Problem 3. (5 points)

In a given circle chords KN and LM are perpendicular. Suppose that $\angle KML = 30^\circ$. Compute $\angle NLM$.

Problem 4. (5 points)

The vertices of a convex quadrilateral $ABCD$ are on a circle. Suppose that AD is a diameter and $\angle BCA = 45^\circ$. Compute $\angle BAD$.

Due Date: Wednesday November 13.