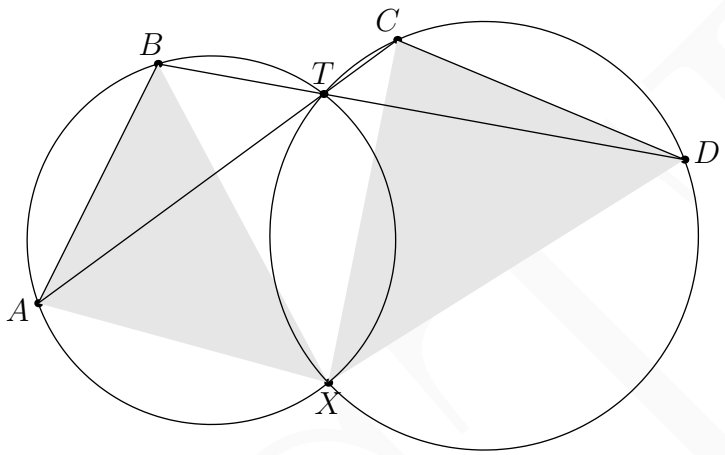
Problem 16 (Spiral Similarity Lemma). Let AB and CD be two segments, and let lines AC and BD meet at T. Let the circumcircles of ABT and CDT meet again at X. Prove that triangles XAB and XCD are similar.



Problem 17 (Reim's Theorem). In the diagram below, points A, B, X, Y lie on a circle, points B, C, Y, Z lie on a circle, points A, B, C are collinear, and points X, Y, Z are collinear. Prove that $AX \parallel CZ$.