

III.3. *If a diameter of a circle bisects a chord which does not pass through the center, it is perpendicular to it; or, if perpendicular to it, it bisects it.*

III.20. *In a circle the angle at the center is double the angle at the circumference, when the rays forming the angles meet the circumference in the same two points.*

III.21. *In a circle, a chord subtends equal angles at any two points on the same one of the two arcs determined by the chord (e.g., in Figure 1.3c, $\angle PQQ' = \angle PP'Q'$).*

III.22. *The opposite angles of any quadrangle inscribed in a circle are together equal to two right angles.*

III.32. *If a chord of a circle be drawn from the point of contact of a tangent, the angle made by the chord with the tangent is equal to the angle subtended by the chord at a point on that part of the circumference which lies on the far side of the chord (e.g., in Figure 1.3c, $\angle OTP' = \angle TPP'$).*