

# **ELEMENTS OF SOLID GEOMETRY**

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Elements of Solid Geometry by W. H. Bruce & C. C. Cody

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**W. H. BRUCE & C. C. CODY**

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SOLID GEOMETRY**



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OF  
**SOLID GEOMETRY**

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### SYMBOLS AND ABBREVIATIONS.

<p>ax. . . . axiom.</p> <p>cor. . . . corollary.</p> <p>def. . . . definition.</p> <p>iden. . . . identity.</p> <p>prop. . . . proposition.</p> <p>post. . . . postulate.</p> <p>cons. . . . construction.</p> <p>hyp. . . . hypothesis.</p> <p>rect. . . . rectangle.</p> <p>rt. . . . right.</p> <p>st. . . . straight.</p> <p>∠ . . . angle.</p> <p>△ . . . triangle.</p> <p>□ . . . parallelogram.</p>	<p>○ . . . circle.</p> <p>+ . . . plus.</p> <p>− . . . minus.</p> <p>× . . . multiplied by.</p> <p>÷, /, : . . . divided by.</p> <p>= . . . is equal to or equivalent to.</p> <p>~ . . . is similar to.</p> <p>≅ . . . is congruent to.</p> <p>&gt; . . . is greater than.</p> <p>&lt; . . . is less than.</p> <p>⊥ . . . is perpendicular to, or a perpendicular.</p> <p>∥ . . . is parallel to, or a parallel.</p>
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q. e. d. (quod erat demonstrandum), which was to be proved.

q. e. f. (quod erat faciendum), which was to be done.

NOTE. The foregoing are used also in the plural, as = means "are equal to," as well as "is equal to."

## REFERENCES TO PLANE GEOMETRY

63. The sum of all the angles about a point is equal to two straight angles.

65. If two straight lines intersect, the vertical angles are equal.

85. In congruent figures homologous parts are equal.

86. Any side of a triangle is less than the sum of the other two, and greater than their difference.

91. Two triangles are congruent if they have two sides and the included angle of the one equal, respectively, to two sides and the included angle of the other.

92. Two right triangles are congruent if the legs of the one are equal, respectively, to the legs of the other.

94. Two triangles are congruent if they have two angles and the included side of the one equal, respectively, to two angles and the included side of the other.

95. Two right triangles are congruent if a leg and an adjacent acute angle of the one are equal, respectively, to a leg and an adjacent acute angle of the other.

106. The perpendicular bisector of a line is the locus of points equidistant from the extremities of the line.

109. Two points each equidistant from the extremities of a line determine the perpendicular bisector of the line.

115. Only one perpendicular can be drawn from a given external point to a given straight line.

116. The perpendicular is the shortest line that can be drawn from a given point to a given line.

117. Two oblique lines from the same point in the perpendicular to a given line, cutting off equal segments from the