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| **5.1 Perpendicular and Angle Bisectors****equidistant -**the same distance from two or more objects **locus -**a set of points that satisfies a given condition  |

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| **5.2 Bisectors of Triangles****concurrent -**a point where three or more lines intersect at one point **point of concurrency -**point where three or more lines coincide **circumcenter of a triangle -**the point of concurrency of the three perpendicular bisectors of a triangle **circumscribed circle -**every vertex of the polygon lies on the circle **incenter of a triangle -**the point of concurrency of the three angle bisectors of a triangle **inscribed circle -**a circle in which every side of the polygon is tangent to the circle **5.3 Medians and Altitudes of Triangles****median of a triangle -**a segment whose endpoints are a vertex of a triangle and the midpoint of the opposite side **centroid of the triangle -**the point of concurrency of the three medians of a triangle **altitude of a triangle -**a perpendicular segment from a vertex to the line containing the opposite side **orthocenter of a triangle** -the point of concurrency of the three altitudes of a triangle  |

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| **5.4 Triangle Midsegment Theorem****midsegment of a triangle -**a segment that joins the midpoints of two sides of the triangle. Every triangle has three midsegments. |

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| **5.5 Indirect Proofs and Inequalities in One Triangle****indirect proof -**a proof in which the statement to be proved is assumed to be false and a contradiction is shown  |

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| **5.6 Inequalities in Two Triangles** |

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| **5.7 Pythagorean Theorem****Pythagorean triple -**a set of three nonzero whole numbers a, b, and c such that a²+b²=c²  |

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| **5.8 Applying Special Right Triangles** |

**45°-45°-90° Triangle Theorem**

In a 45°-45°-90° triangle, both legs are congruent and the length of the hypotenuse is the length of the legs times √2

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**30°-60°-90° Triangle Theorem**

In a 30°-60°-90° triangle, the length of the hypotenuse is 2 times the length of the shorter leg, and the length of the longer leg is the length of the shorter leg times√3