 Applications of geometrical properties

Teaching strategies and activities

See Preliminary Mathematics teaching strategies and resources.

Scope and Sequence note: often in the HSC papers the properties investigated in plane geometry are used in coordinate geometry questions. To this end while reviewing plane geometry in the HSC year it is advisable to use examples involving coordinate geometry.

Content

Plane geometry (review).

Application of these properties to simple theoretical problems requiring one or more steps of reasoning.

* Properties of angles at a point and of angles formed by transversals to
* Parallel lines. Tests for parallel lines.
* Angle sums of triangles, quadrilaterals and general polygons.
* Exterior angle properties.
* Congruence of triangles. Tests for congruence.
* Properties of special triangles and quadrilaterals. Tests for special quadrilaterals.
* Properties of transversals to parallel lines.
* Similarity of triangles. Tests for similarity.
* Pythagoras’ theorem and its converse.
* Area formulae

Resources

HSC exam question 2000 3a.