NCERT Exemplar Solutions in Mathematics class ix, Chapter 5

Exercise 5.4

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Answer 1

The terms need to be defined are

Polygon : A simple closed figure made up of three or more line segments.

Line segment : Part of a line with two end points.

Line : Undefined term

Point : Undefined term

Angle : A figure formed by two rays with a common initial point.

Ray : Part of a line with one end point.

Undefined terms used are : line, point.

Euclid's fourth postulate says that "all right angles are equal to one another."

This is applicable on angles 60° too.

In an equilateral triangle, all angles measure 60°, therefore, all angles are equal

Two line segments are equal to third line segment (Given).

Therefore, all the three sides of an equilateral triangle are equal. (by Euclid's first axiom "things which are equal to the same thing are equal to one another.")

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