

GEOMETRY (Q 4, PAPER 2)

LESSON NO. 4: THE TEN THEOREMS

2007

- 4 (b) Prove that the products of the lengths of the sides of a triangle by the corresponding altitudes are equal.

2006

- 4 (b) Prove that if the lengths of two sides of a triangle are unequal, then the degree-measures of the angles opposite to them are unequal, with the greater angle opposite to the longer side.

2005

- 4 (b) Prove that a line which is parallel to one side-line of a triangle, and cuts a second side, will cut the third side in the same proportion as the second.

2004

- 4 (b) Prove that the opposite sides of a parallelogram have equal lengths.

2003

- 4 (b) (i) Prove that the sum of the degree-measures of the angles of a triangle is 180° .
(ii) Deduce that the degree-measure of an exterior angle of a triangle is equal to the sum of the degree-measures of the two remote interior angles.

2002

- 4 (b) Prove that if three parallel lines make intercepts of equal length on a transversal, then they will also make intercepts of equal length on any other transversal.

2001

- 4 (b) Prove that a line which is parallel to one side-line of a triangle, and cuts a second side, will cut the third side in the same proportion as the second.

2000

- 4 (b) Prove that in a right-angled triangle, the square of the length of the side opposite to the right-angle is equal to the sum of the squares of the lengths of the other two sides.

1999

- 4 (b) Prove that the sum of the lengths of any two sides of a triangle is greater than that of the third side.

1998

- 4 (b) Prove that if the lengths of two sides of a triangle are unequal, then the degree-measures of the angles opposite to them are unequal, with the greater angle opposite to the longer side.

1997

- 4 (b) Prove that the products of the lengths of the sides of a triangle by the corresponding altitudes are equal.

1996

- 4 (b) Prove that a line which is parallel to one side-line of a triangle, and cuts a second side, will cut the third side in the same proportion as the second.