Summer Examination 1916.

Junior Pass Geometry.

I   Show how to bisect a given finite straight line.

II   ABX & ABY are two triangles on the same base AB, on the
same side of it, and equal in area. Prove that AB is parallel to XY.

III Show how to describe a rectangle equal in area to a given
quadrilateral.

IV   If one circle touches another _internally_, Prove that the two
centres and the point of contact are in one straight line

V   Prove that the angles in the same segment of a circle are
equal.

VI   Draw a straight line AB. 4·3 inches long. Describe a sqr ABCD
on AB. Measure the distance from A to the middle point of CD.

VII Draw two straight lines AX & AY making the angle XÂY
equal to one third of a right angle. Take the point B n AX
so that AB equal 8 cm. Describe a circle of radius 5 cm. touch-
ing AX at B, & cutting AY at P & Q. Measure PQ.

VIII AD is a perpendicular from the opposite angular point A, of a triangle to the
opposite side BC. If AB is greater than AC. prove that BD is
greater than DC

IX   P is a given point within a circle. Show how to draw a cord
through P. so that P may be the point of bisection of
the cord.

X   If the sqr on one side of a triangle is equal to the sum
of the sqrs on the other two sides, Prove that the angle
contained by those sides is equal to a _right angle_