Junior & Leaving Certificate Constructions

1. Bisector of a given angle, using only a compass and a straight edge

2. Perpendicular bisector of a segment, using only compass and straight edge

3. Line perpendicular to a given line l, passing through a given point not on l

4. Line perpendicular to a given line l, passing through a given point on l

5. Line parallel to a given line, through given point

6. Division of a segment into 2, 3 equal segments, without measuring it

7. Division of a segment into any number of equal segments, without measuring it

8. Line segment of given length on a given ray

9. Angle of given number of degrees with a given ray as one arm

10. Triangle, given lengths of three sides

11. Triangle, given SAS data

12. Triangle, given ASA data

13. Right-angled triangle, given the length of the hypotenuse and one other side

14. Right-angled triangle, given one side and one of the acute angles (several cases)

15. Construct a rectangle given the side lengths.

16a. Construct the circumcentre of a given triangle, using only a straight edge and a compass.

16b. Construct the circumcircle of a given triangle using only a straight edge and a compass.

17a. Construct the incentre of a given triangle, using only a straight edge and a compass.

17b. Construct the incircle of a given triangle, using only a straight edge and a compass.

18. Construct an angle of 60 without using a protractor or set square.

19. Construct a tangent to a given circle at a given point on it.

20. Construct a parallelogram, given the length of the sides and the measure of the angles.

21. Construct the centroid of a triangle.

HL 22. Construct the orthocentre of a triangle.