



MATHSPPOINTS.IE
JUNIOR & LEAVING CERT

CONSTRUCTIONS

JUNIOR CERT HIGHER LEVEL

Junior Certificate Higher Level – Constructions



1. Bisector of a given angle, using only compass and 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 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. (Side Angle Side)

12. Triangle, given ASA data. (Angle Side Angle)

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.

15. Rectangle, given side lengths.

Steps

1. With Z as centre draw arcs cutting l at X and Y .
2. With X as centre draw an arc below the line between X and Y .
3. With Y as centre and using the same compass width draw an overlapping arc.
4. Mark the point of intersection and draw a line from this point to Z .
5. This line is perpendicular to the line l , through Z .

