Perpendicular to a Given line through a given point

To construct a line perpendicular to a given line through a point on the line is pretty easy. If you want a perpendicular through C

1. Draw a circle around the point C, intersecting the line in P and Q.

2. Now notice that the perpendicular bisector of the segment PQ will pass through C, since C is the midpoint of PQ.

Now if C is not on the line through A and B,

1. Draw a circle at C that intersects the line in two points, P and Q.

2. The perpendicular bisector of PQ will pass through C. (Why?)