**6F Finding the Centre from Chords**

1. The points A(-8,1), B(4,5) and C(-4,9) lie on the circle, as shown in the diagram.
2. Show that AB is a diameter of the circle.
3. Find an equation of the circle
4. The points P(3,16), Q(11,12) and R(-7,6) lie on the circumference of a circle. The equation of the perpendicular bisector of PQ is $y=2x$.
5. Find the equation of the perpendicular bisector of PR
6. Find the coordinates of the centre of the circle
7. Work out the equation of the circle