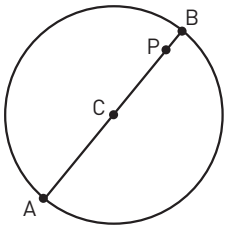
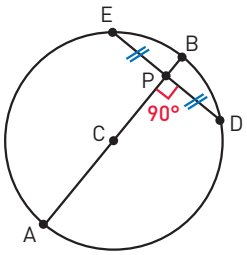
YOU & MATHS **Play the right chord** Let P be a point that belongs to the inside of a circle. Draw the chord that has P as its midpoint.

If P is the centre of the circle, any diameter satisfies the request.
Let us now suppose hat P is not the centre of the circle.
We recall that if a chord and a diameter are perpendicular, the diameter divides the chord in two equal halves. We use this result to find the chord that we are looking for.
Let C be the centre of the circle and let AB be the diameter that passes through point P.



Now let DE be the chord perpendicular to AB that passes through P.



Thanks to the mentioned theorem, P is the midpoint of DE.