2). M is a pt on (C) of diameter [AB] (given)
So, $\hat{AMB} = 90°$ (inscribed angle facing diameter)
So, (AM) ⊥ (MB).
P is the intersection pt. of the tangents [PB) & [PM) to (C)
at B & M respectively (given)

So, (OP) is the perp. bisector of [MB] (tangent theorem:
st. line joining the pt of intersection of two
tangents & center of circle is the perp. bisector
of the segment joining the pts of tangencies)
So, (OP) ⊥ (MB) ①
Thus, (OP) is parallel to (AM) (two st. lines perp. to same
st. line are parallel).

3). In △ ABR we have:
O is the center of (C) with diameter [AB] (given)
So, O is midpt of [AB].
& (OP) // (AM). (proved)
but pts A, M & R are collinear (given)
so (OP) // (AR).
Thus, P is midpt of [BR] (by converse of midpt
theorem in a △).

4a) In △ OQS we have:
[SB) is a tangent to (C) at B. (given)
[QM) is " " " (C) " M (given)
So, [SB) & [QM) are heights relative to [OQ] and [OS]
respectively
but, [SB) & [QM) intersect at P (given)
So, P is the orthocenter of OQS (intersection pt of heights)
And [OP) is issued from vertex & passes through P.