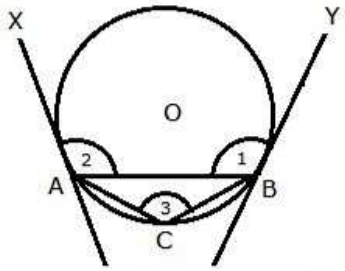
(9) to prove $\angle XAB = \angle YBA$



const take a point C on $\overset{\frown}{AB}$, join AC, BC

proof $\angle 1 = \angle 3$ ...(i) [angles in alternate segment]

$\angle 2 = \angle 3$ ...(ii)

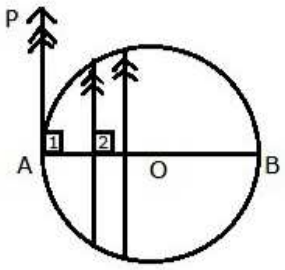
From (i), (ii)

$\angle 1 = \angle 2$

$\Rightarrow \angle XAB = \angle YBA$

NCERT Exemplar Solutions by Dev Anoop (Bathinda)

(10)



to prove - AB bisects l

proof $\angle 1 = 90°$ (radius ⊥ tangent)

but $\angle 1 = \angle 2$ (corresponding angles, AP ∥ l)

$\therefore$ AB ⊥ l

$\because$ perpendicular from centre of ⊙ to the chord bisects it.

But l is any chord parallel to PA

$\therefore$ AB bisects every chord parallel to PA