

Bereken die waardes van x , y en / of k , met redes, in elk van die volgende sketse:
[O is telkens die middelpunt van die sirkel.]

(1)

$$OP \perp AB \quad [\text{radius} \perp \text{raaklyn}]$$

$$\therefore k = 90^\circ$$

$$\angle OSB = 180^\circ - 15^\circ = 165^\circ \quad [\angle^e \text{reguitlyn}]$$

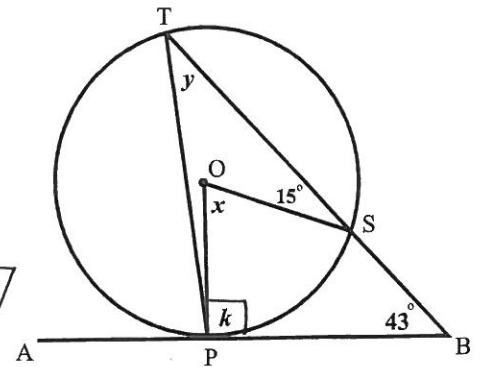
$$\text{maar } x + \angle OSB + 43^\circ + k = 360^\circ$$

$$\therefore x = 360^\circ - 165^\circ - 43^\circ - 90^\circ \quad [\text{Omwenteling}]$$

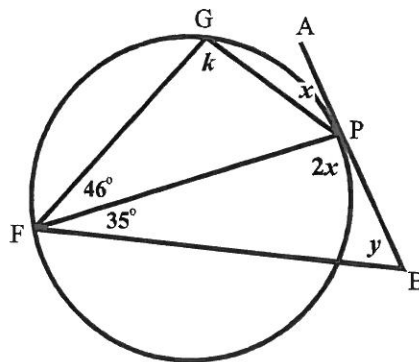
$$\therefore x = 62^\circ$$

$$\text{maar } x = 2y = 62^\circ \quad [\text{mpts } \angle = 2 \times \text{ontreks } \angle]$$

$$\therefore y = 31^\circ$$



(2)



$$x = 46^\circ \quad [\angle \text{tussen RL} \text{ \& } \text{kkoord}]$$

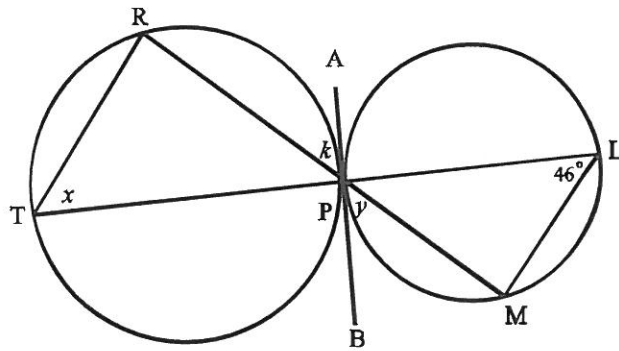
$$\therefore 2x = 2 \times 46^\circ = 92^\circ$$

$$\text{maar } y + 2x + 35^\circ = 180^\circ \quad [\text{binne } \angle^e \Delta]$$

$$\therefore y = 180^\circ - 92^\circ - 35^\circ = 53^\circ$$

$$2x = k = 92^\circ \quad [\angle \text{tussen RL} \text{ \& } \text{kkoord}]$$

(3)

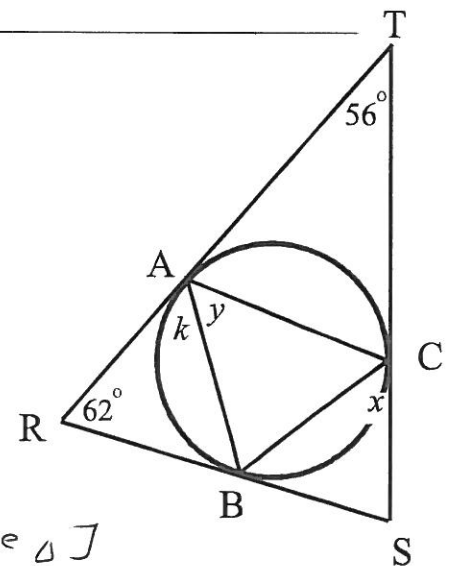


$$y = 46^\circ \quad [\angle \text{ tussen } RL \text{ + koord}]$$

$$\text{maar } k = y = 46^\circ \quad [\text{regoorst. } \angle^e]$$

$$k = x = 46^\circ \quad [\angle \text{ tussen } RL \text{ + koord}]$$

(4) RT, TS en RS is raaklyne.



$$AR = BR \quad [\text{raaklyne uit } R]$$

$$\therefore \angle ARB = k \quad [\angle^e \text{ teenoor gelyke sye}]$$

$$\text{maar } 62^\circ + k + k = 180^\circ \quad [\text{binne } \angle^e \Delta]$$

$$\therefore 2k = 180^\circ - 62^\circ = 118^\circ$$

$$\therefore k = 59^\circ$$

$$\hat{S} = 180^\circ - 62^\circ - 56^\circ \quad [\text{binne } \angle^e \Delta]$$

$$\therefore \hat{S} = 62^\circ$$

$$\therefore x = 59^\circ \quad [\text{Net soos } k!]$$

$$\therefore y = x = 59^\circ \quad [\angle \text{ tussen } RL \text{ + koord}]$$

(5) KDL is 'n raaklyn.

$$CD = DE$$

$$x = 34^\circ \quad [\angle \text{e onderspan gelyke koorde}]$$

$$y = 34^\circ \quad [\angle \text{tussen RL \& koord}]$$

$$k = x = 34^\circ \quad [\angle \text{tussen RL \& koord}]$$

