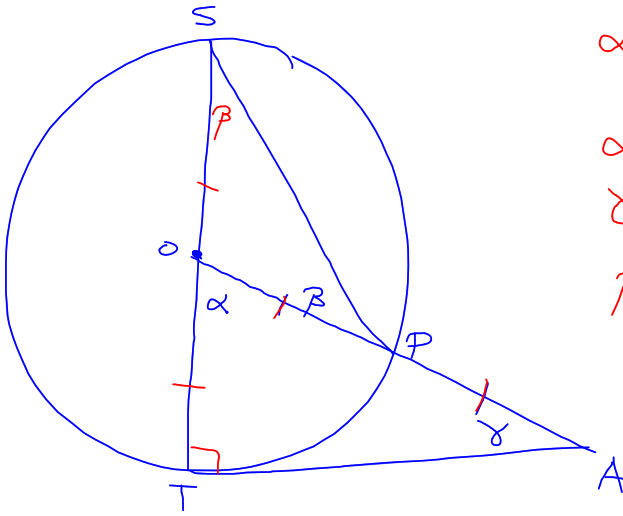


3a)



$$\alpha = 2\beta$$

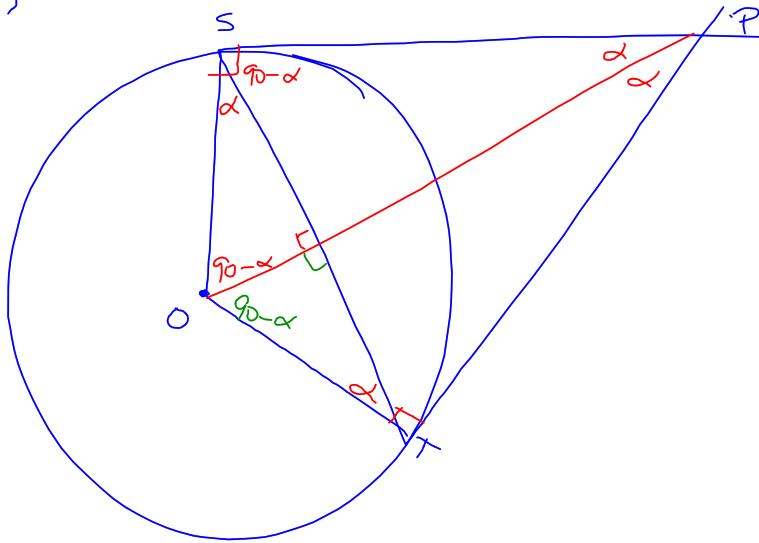
$$\alpha = 60^\circ$$

$$\delta = 30^\circ$$

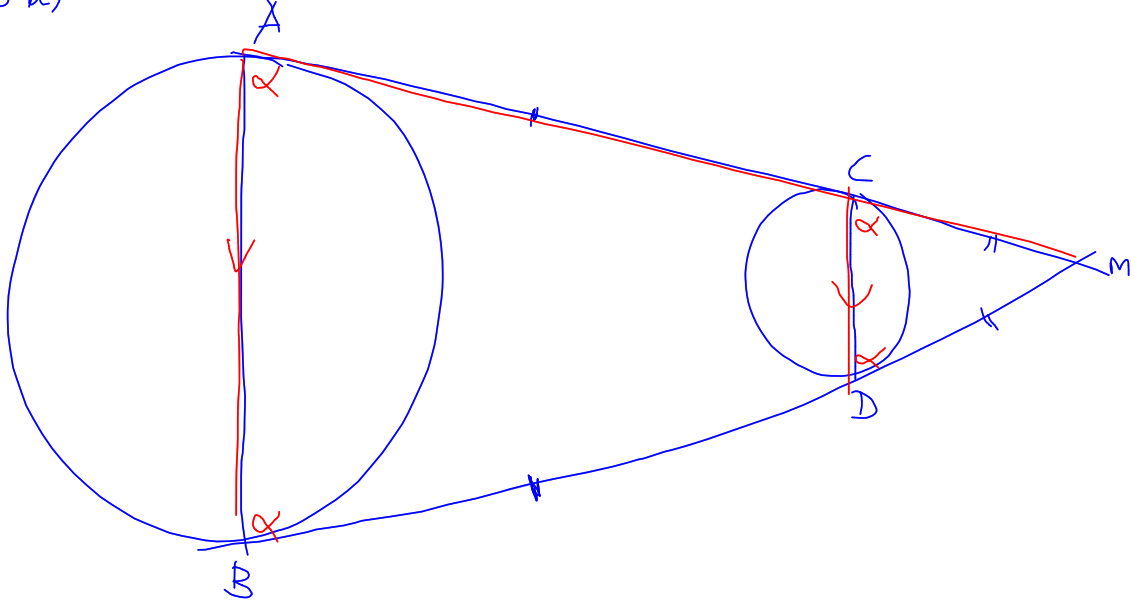
$$\beta = 30^\circ$$



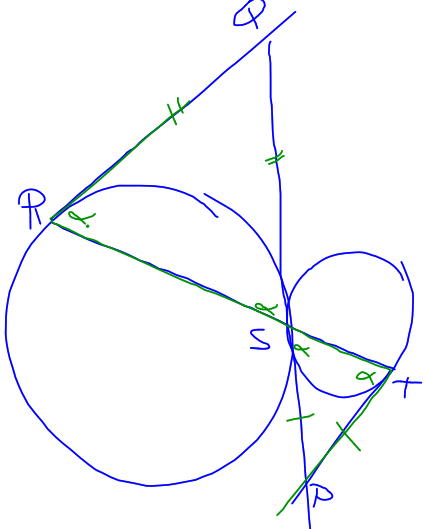
4d)



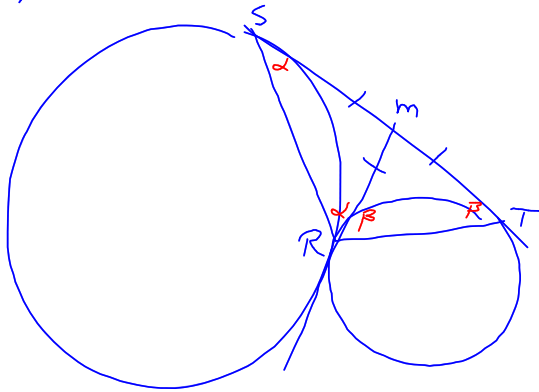
(b ii)



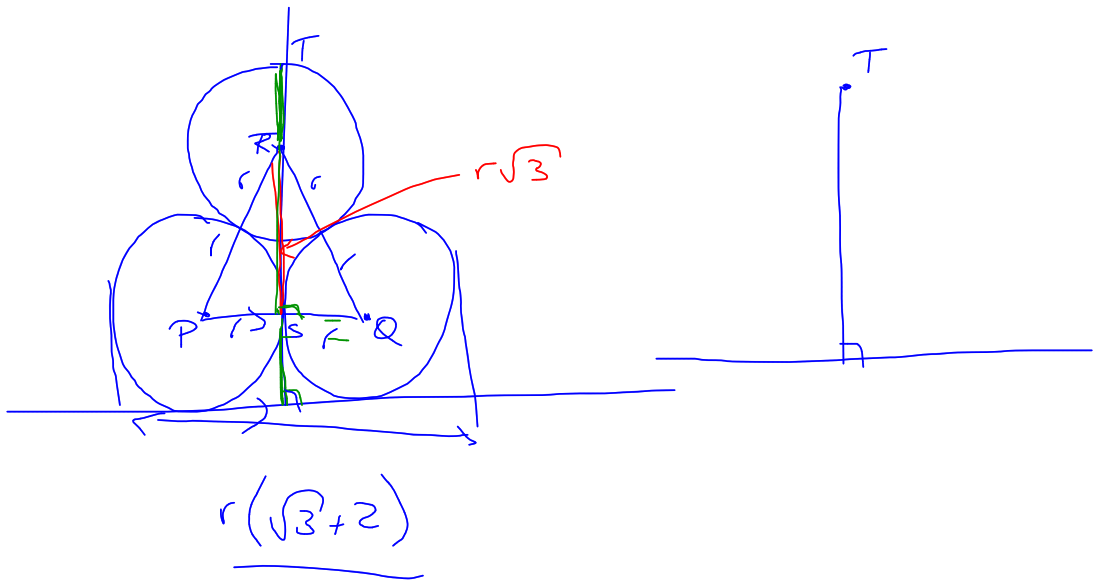
6c)

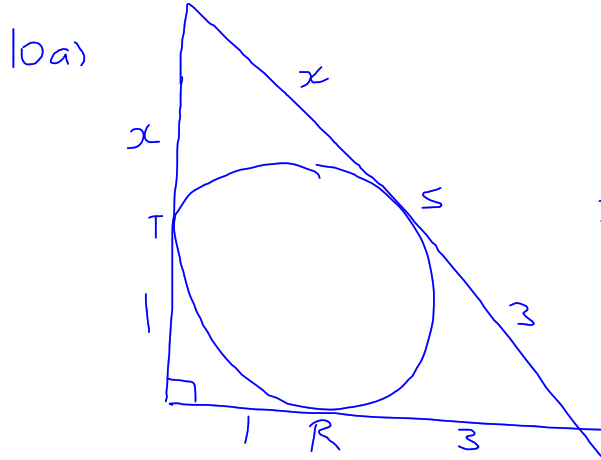


6d)



9b)





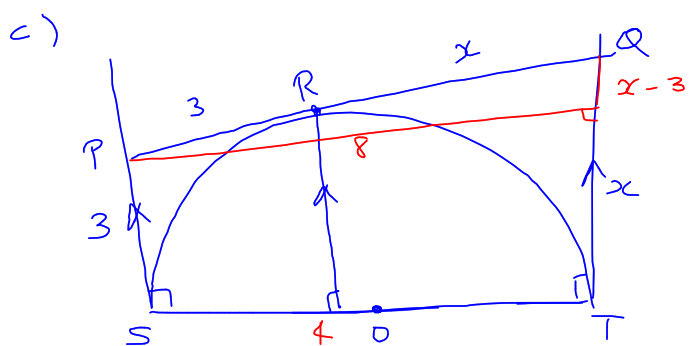
$$(x+3)^2 = (x+1)^2 + 4^2$$

$$x^2 + 6x + 9 = x^2 + 2x + 1 + 16$$

$$4x = 8$$

$$\underline{\underline{x = 2}}$$





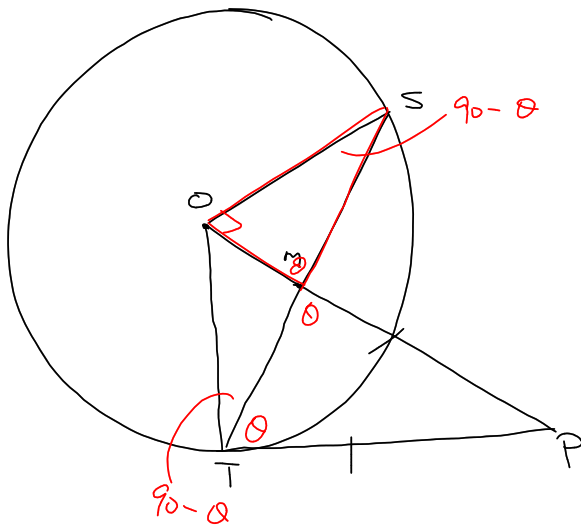
$$(x+3)^2 = (x-3)^2 + 8^2$$

$$x^2 + 6x + 9 = x^2 - 6x + 9 + 64$$

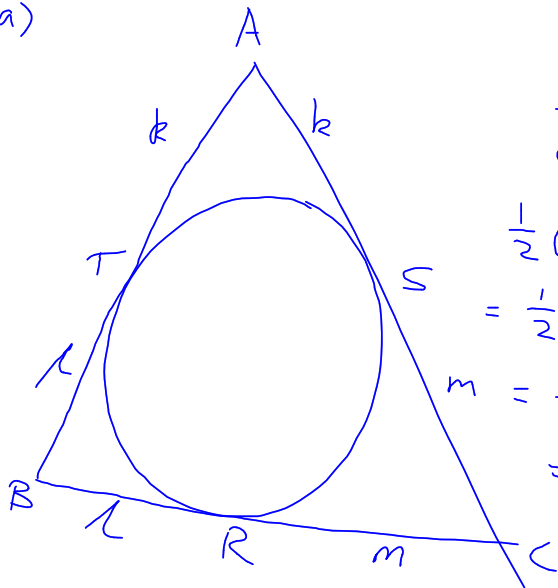
$$12x = 64$$

$$x = \frac{16}{3}$$

12b)



14a)



$$a = m + l$$

$$b = m + k$$

$$c = k + l$$

$$\frac{1}{2}(-a + b + c)$$

$$= \frac{1}{2}(-m - l + m + k + k + l)$$

$$m = \frac{1}{2}(2k)$$

$$= \underline{k}$$

$$b) (k+m)^2 = (k+l)^2 + (l+m)^2$$

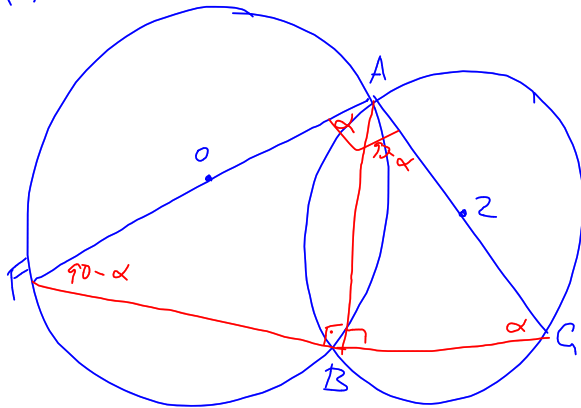
$$k^2 + 2mk + m^2 = k^2 + 2kl + l^2 + l^2 + 2lm + m^2$$

$$2mk - 2kl = 2l^2 + 2lm$$

$$k(m-l) = l(l+m)$$

$$k = \frac{l(l+m)}{(m-l)}$$

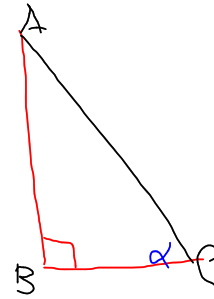
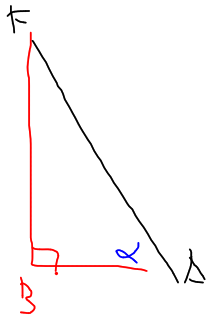
16a(ii)



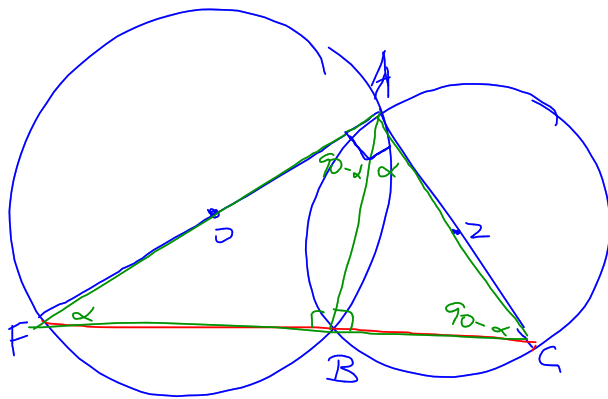
$$\frac{AB}{BC} = \frac{FB}{AB}$$

$$AB^2 = FB \times BC$$

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(6a(u))



$$\frac{AB}{BF} = \frac{GB}{AB}$$

$$\underline{AB^2 = GB \times BF}$$