then, [FO) is the bisector of $B\hat{F}C$ (tangent theorem ①)
_ (d) & (d₁) are parallel (given)
so, $E\hat{O}F$ is $90^\circ$ (bisectors of 2 co_interior angles form a right angle).
hence, EOF is right $\Delta$ at O.
_ $AEO = 30^\circ$ (angle of semi_equi $\Delta$ AEO)
[EO) is the bisector of $A\hat{E}C$ (proved)
then, $O\hat{E}F = 30^\circ$
thus, EOF is semi_equilateral $\Delta$ at O.

c_ $EO = \frac{\sqrt{3}}{2} \times hyp$ (side facing $60^\circ$ of a semi_equi. $\Delta$)

$a = \frac{\sqrt{3}}{2} \times EF$

$\frac{\sqrt{3}}{2} EF = \frac{a}{1}$

$\sqrt{3}\, EF = 2a$

$EF = \frac{2a \times \sqrt{3}}{\sqrt{3} \times \sqrt{3}}$

$EF = \frac{2a\sqrt{3}}{3}$ cm

3) In right $\Delta$ EOF we have:
_ H is the midpt. of [EF] (given)
then, [OH] is a median relative to hyp. [EF]
so, $OH = \frac{EF}{2}$ (midpt. theorem in a right $\Delta$)

$= \frac{\frac{2a\sqrt{3}}{3}}{\boxed{\frac{2}{1}}}$

$= \frac{\cancel{2}a\sqrt{3}}{\cancel{2} \times 3}$