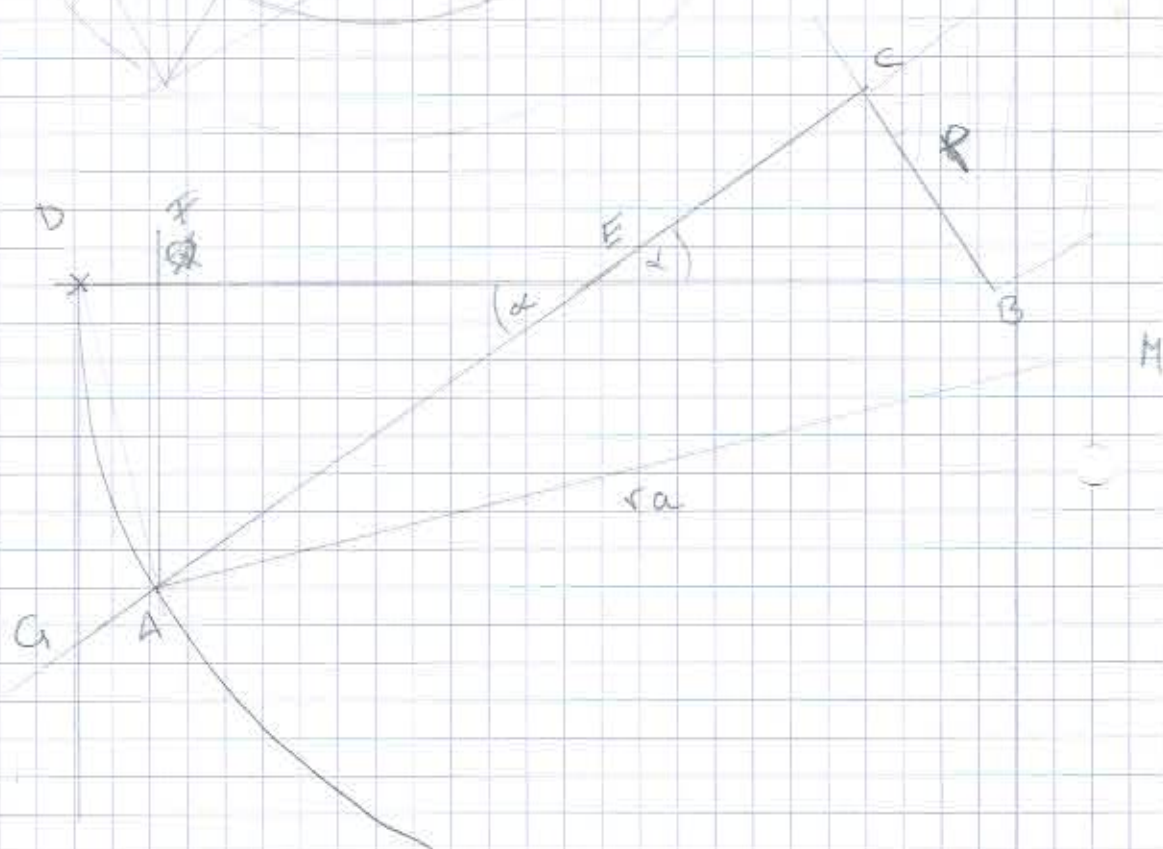
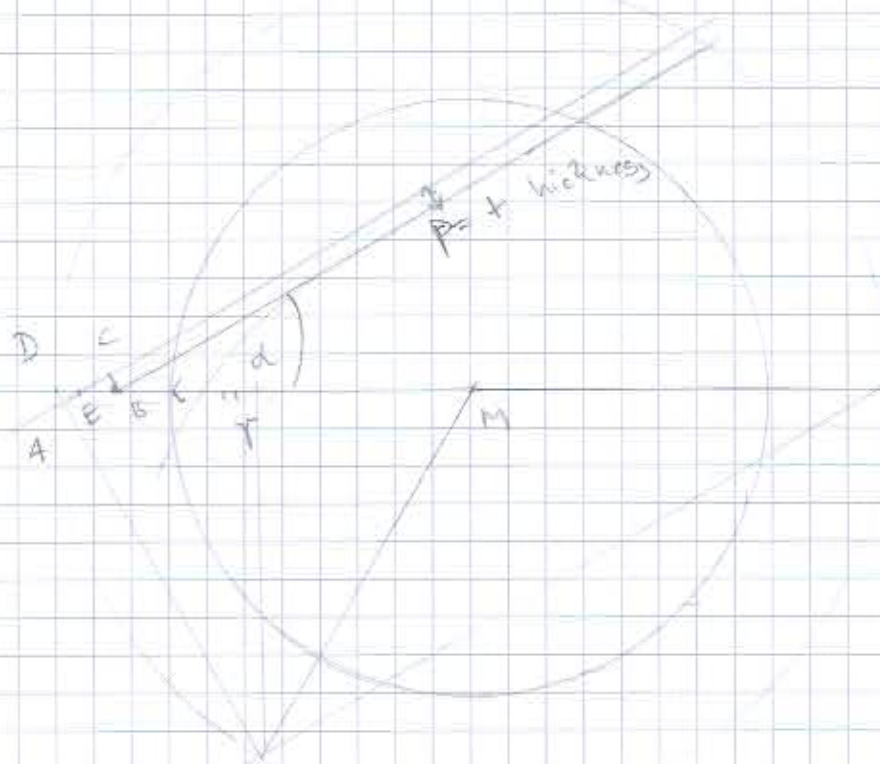


①



$$\overline{MB} = r_f + \frac{\alpha}{2}$$

$$\triangle EBC : \sin \alpha = \frac{r}{EB} \quad EB = \frac{r}{\sin \alpha}$$

$$\overline{EM} = \overline{EB} + \overline{BM} = \frac{P}{\sin \alpha} + r + \frac{a}{2}$$

$$\overline{DE} = r_a - EM$$