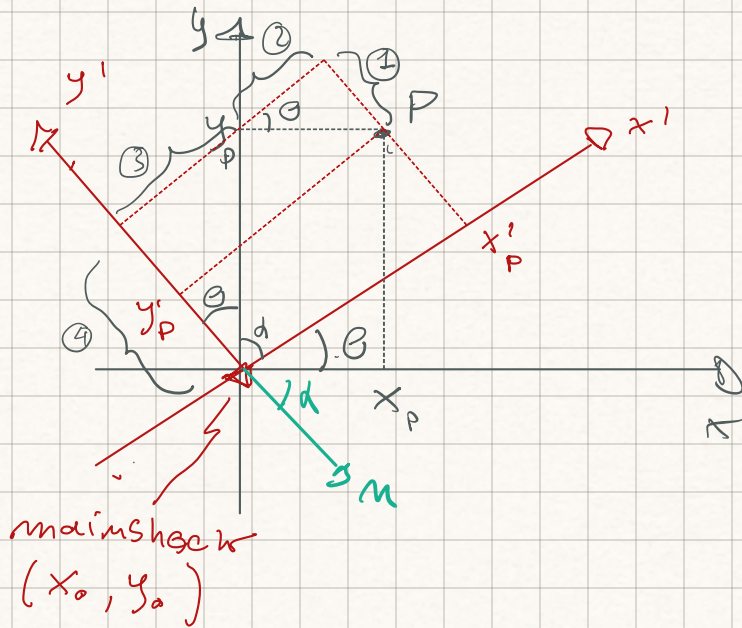


→ theory Plot on section (change coordinate system)

- we need to find the x positions of the points along the section with azimuth $= \alpha$
- At each point assign $z = \text{depth}$



I have to find the coordinates of P in the new plane $x'-y'$

$$P = (x_p, y_p)$$

① $x_p \sin \theta$

② $x_p \cos \theta$

③ $y_p \sin \theta$

④ $y_p \cos \theta$

$$x'_p = x_p \cos \theta + y_p \sin \theta$$

$$y'_p = y_p \cos \theta - x_p \sin \theta$$

→ we will work only on the x direction because we want a 2D section

I know that :

$$\theta = 90 - \alpha$$

$$x' = x_p \cos(90 - \alpha) + y_p \sin(90 - \alpha)$$

$$x' = x_p \sin \alpha + y_p \cos \alpha$$

→ we want to center the section on the main shock $= (x_0, y_0)$

x_p and y_p will become $x_p - x_0$, $y_p - y_0$

$$x' = (x_p - x_0) \sin d + (y_p - y_0) \cos d$$



these two correspond
to the coordinates of
the **reference vector** \vec{r}

$$x' = (x_p - x_0) n[0] + (y_p - y_0) n[1]$$

⚡

- $\sin d$

$$x' = (y_p - y_0) n[1] - (x_p - x_0) n[0]$$