

-33

15, 16, 18, 23, 24, 26

$$\sqrt{S_1} = L$$

$$L = \sqrt{\frac{a^2 m^2 + b^4}{a^2 m^2 + b^2} - 1}$$

$$(x_1, y_1)$$

$$\frac{x_1}{-a^2 m} = \frac{y_1}{b^2} = \frac{1}{\sqrt{a^2 m^2 + b^2}}$$

$$x^2 + y^2 = r^2$$

$$y = mx \pm \sqrt{a^2 m^2 + b^2}$$

$$\frac{a^2 m^2 + b^2}{1 + m^2} = r^2$$

$$m = \pm \sqrt{\frac{r^2 - b^2}{a^2 - r^2}}$$

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$$

$$y - mx = \sqrt{a^2 m^2 + b^2}$$

$$\frac{x_1}{a^2} + \frac{y_1}{b^2} = 1$$

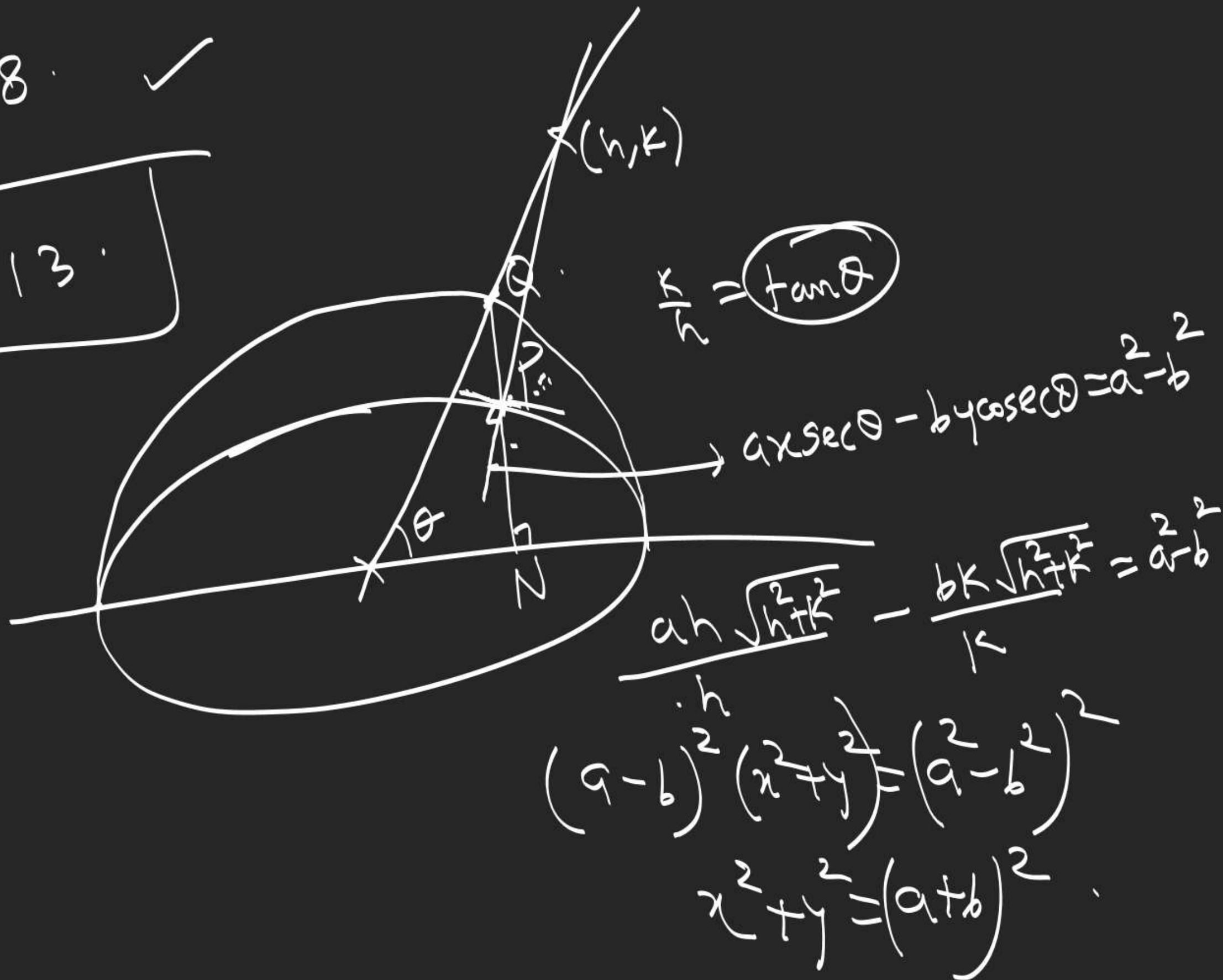
$\Sigma x - 35$

18

✓

$\Sigma x - 34$

13



Paper-1., Prob → (6-10)

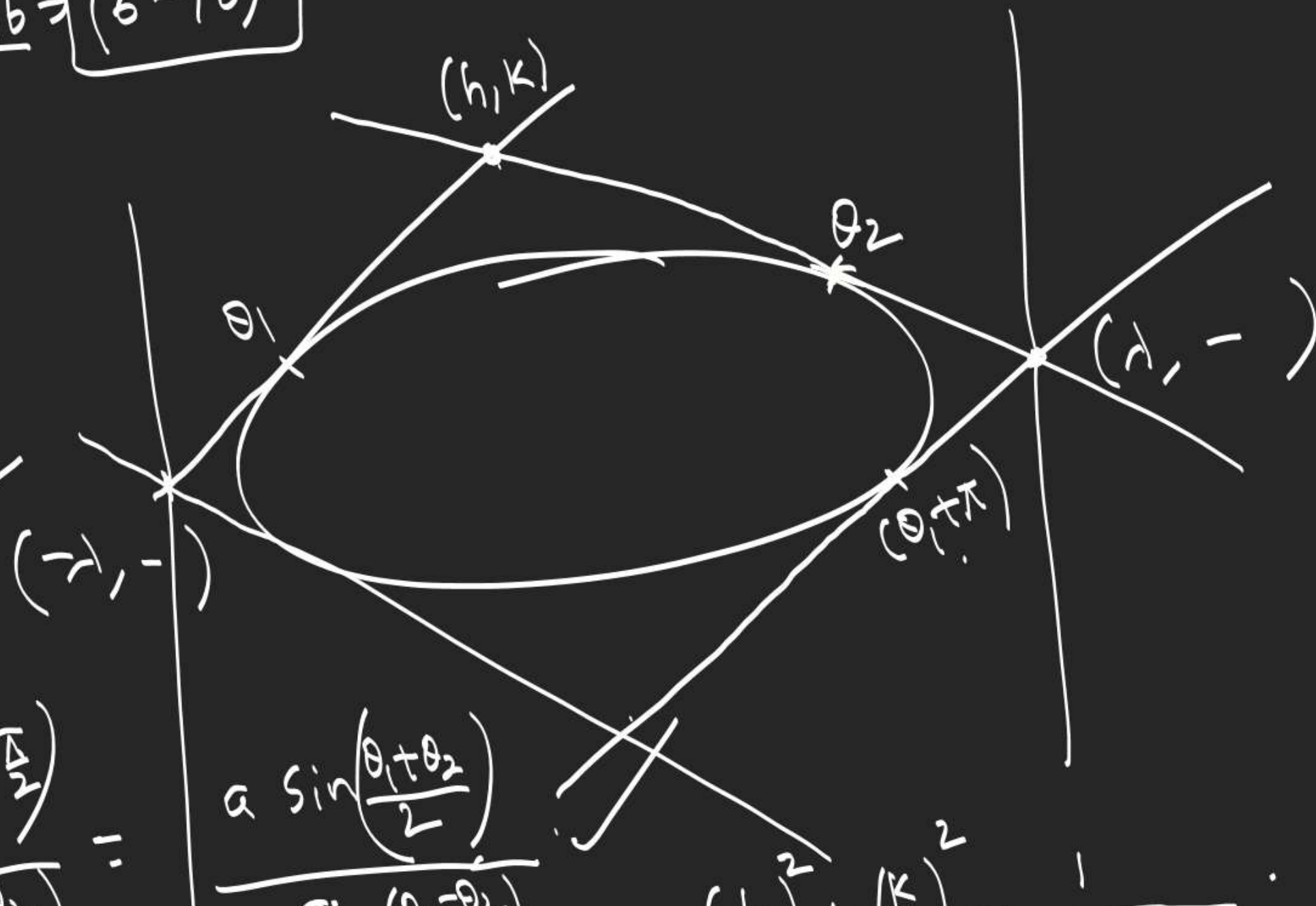
$$h = \frac{a \cos\left(\frac{\theta_1 + \theta_2}{2}\right)}{\cos\left(\frac{\theta_1 - \theta_2}{2}\right)}$$

$$k = \frac{b \sin\left(\frac{\theta_1 + \theta_2}{2}\right)}{\cos\left(\frac{\theta_1 - \theta_2}{2}\right)}$$

$$\lambda = \frac{a \cos\left(\frac{\theta_1 + \theta_2 + \Delta}{2}\right)}{\cos\left(\frac{\Delta + \theta_1 - \theta_2}{2}\right)}$$

$$\lambda = \frac{a \sin\left(\frac{\theta_1 + \theta_2}{2}\right)}{\sin\left(\frac{\theta_1 - \theta_2}{2}\right)}$$

$$\frac{k}{\lambda} = \frac{b}{a} \tan\left(\frac{\theta_1 - \theta_2}{2}\right)$$



$$\left(\frac{h}{a}\right)^2 + \left(\frac{k}{b}\right)^2 = \frac{1}{\cos^2\left(\frac{\theta_1 - \theta_2}{2}\right)}$$

$$\frac{h^2}{a^2} + \frac{k^2}{b^2} = 1 + \left(\frac{a}{b}\right)^2 \tan^2\left(\frac{\theta_1 - \theta_2}{2}\right)$$