FORMULAE FOR NUMERICAL CALCULATION

Condition for first order secondary minima is $\boxed{a \sin\theta_1 = \pm\lambda}$

Similarly condition for n^{th} order secondary minima is $\boxed{a \sin\theta_1 = \pm n\lambda}$

Where n = 1, 2, 3, ……..

Condition for first order maxima is $\boxed{a \sin\theta_1' = \pm \dfrac{3\lambda}{2}}$

Similarly, in general, for n^{th} order maxima

$$\boxed{a \sin\theta_n' = \pm (2n+1)\,\dfrac{\lambda}{2}}$$

Where n = 1, 2, 3, ……..

1. **Angular position of first order secondary minima –**

    Since for first order minima condition is $\qquad a \sin\theta_1 = \pm\lambda$

    We get, $\boxed{\sin\theta_1 = \pm \dfrac{\lambda}{a}}$

(If λ is very-very smaller than a (i.e. $\lambda << a$), $\angle\theta_1$ is very small and $\sin\theta_1 \approx \theta_1$ (in rad)

    So, under the condition $\lambda << a$ $\qquad \boxed{\boldsymbol{\theta_1} \textbf{ (in rad)} = \pm \dfrac{\lambda}{a}}$