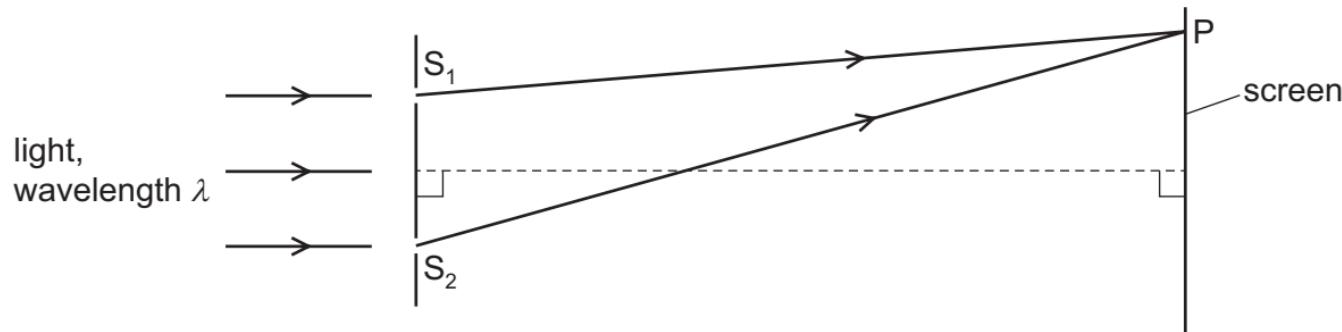


- 28 Light of wavelength  $\lambda$  is incident normally on two narrow slits  $S_1$  and  $S_2$ , a small distance apart. Bright and dark fringes are observed on a screen a long distance away from the slits.



The  $n$ th **dark** fringe from the central bright fringe is observed at point P on the screen.

Which equation is correct for all positive values of  $n$ ?

A  $S_2P - S_1P = \frac{n\lambda}{2}$

B  $S_2P - S_1P = n\lambda$

C  $S_2P - S_1P = (n - \frac{1}{2})\lambda$

D  $S_2P - S_1P = (n + \frac{1}{2})\lambda$