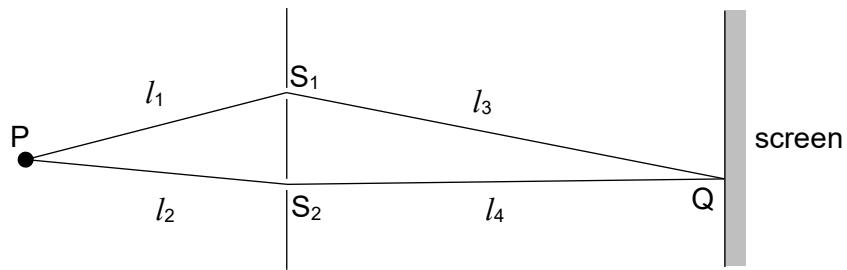


- 14** Two identical narrow slits S_1 and S_2 are illuminated by light of wavelength λ from a point source P as shown. The light through the slits is then captured on a screen.



Given that m is a positive integer, what is the condition for destructive interference at Q?

A $l_3 - l_4 = m\lambda$

B $l_3 - l_4 = \left(\frac{2m-1}{2}\right)\lambda$

C $(l_1 + l_3) - (l_2 + l_4) = m\lambda$

D $(l_1 + l_3) - (l_2 + l_4) = \left(\frac{2m-1}{2}\right)\lambda$