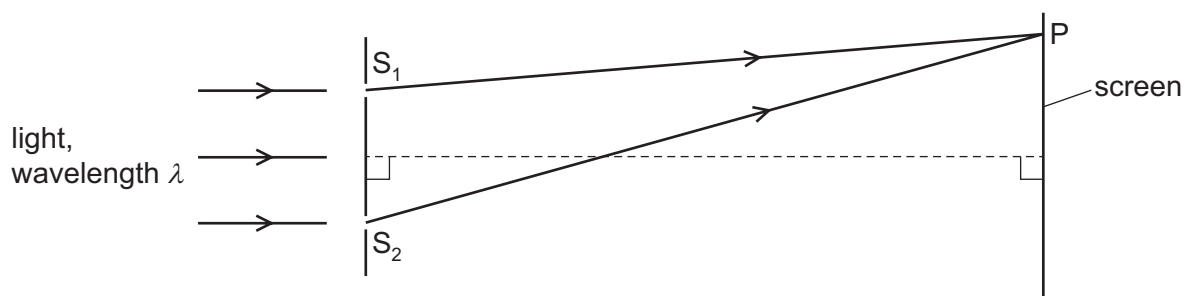**28** Light of wavelength λ is incident normally on two narrow slits S_1 and S_2, a small distance apart. Bright and dark fringes are observed on a screen a long distance away from the slits.

The nth **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 $S_2P - S_1P = \dfrac{n\lambda}{2}$

B $S_2P - S_1P = n\lambda$

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

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

29 Green light is incident normally on a diffraction grating and forms a diffraction pattern on a distant screen.
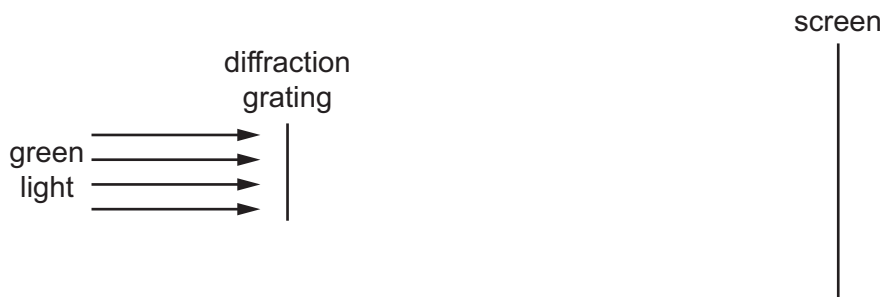
Which change, on its own, would **decrease** the separation of the diffraction maxima on the screen?

A Increase the distance between the screen and the diffraction grating.

B Replace the diffraction grating with a grating that has a smaller separation between the slits.

C Replace the diffraction grating with a grating that has fewer slits per unit length.

D Replace the green light with red light.