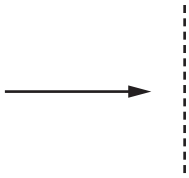
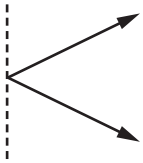
29 Monochromatic light is directed at a diffraction grating, as shown.

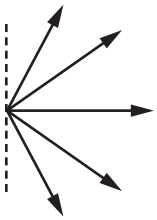


Which diagram could show all the possible directions of the light, after passing through the grating, that give maximum intensity?

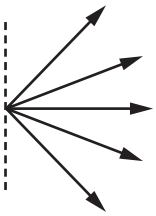
A



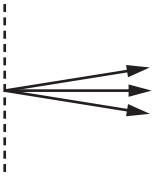
B



C



D



30 Why can an observable interference pattern **never** be obtained between two monochromatic beams of light from different lamps?

A The frequency of the light from the two lamps can never be the same.

B The light from the two lamps can never be coherent.

C The temperature of the filaments of the two lamps used can never be the same.

D The wavelength of the light from the two lamps must always be different.