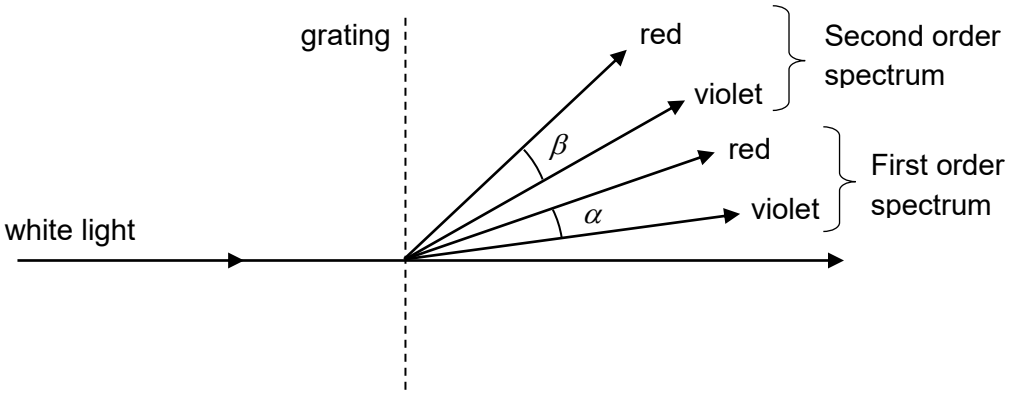
19 A diffraction grating with 6.0×10^5 lines per metre is placed at right angles to a ray of white light. The first and second order spectra produced are shown in the diagram.



The angle between the red and violet ends of the spectrum is α for the first order spectrum and β for the second order spectrum. How do α and β compare?

A $\alpha < ½ \beta$ **B** $\alpha = ½ \beta$ **C** $\alpha = \beta$ **D** $\alpha > \beta$