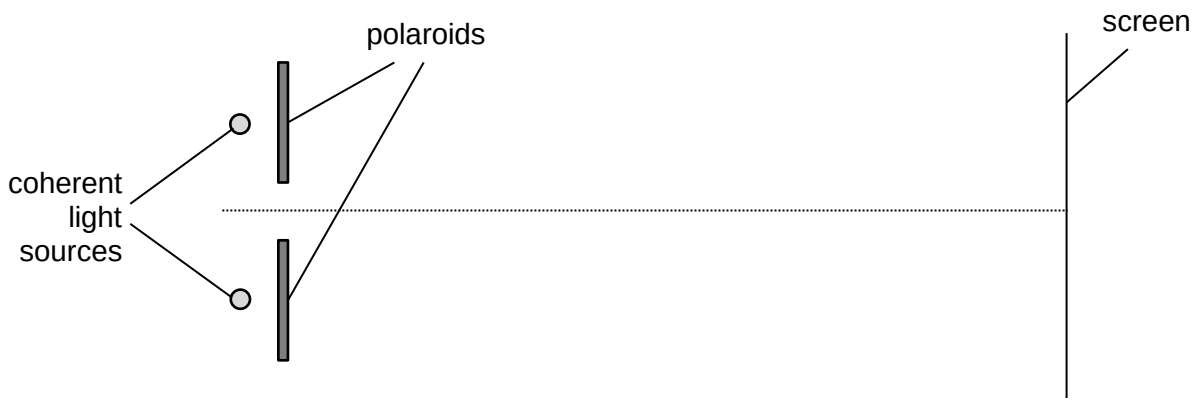
17 Light is polarised when it passes through a sheet of material known as polaroid.

Two sources producing coherent light waves are placed at an equal distance away from an observation screen. Each source was covered with a polaroid.



Initially, both polaroids had their transmission axes in the same direction. The intensity of the central maximum fringe formed from the interference of the two light waves was measured to be I.

One of the polaroids is rotated by 60°.

What is the new intensity of the central maximum fringe?

A $\frac{1}{2}I$ **B** $\frac{9}{16}I$ **C** $\frac{3}{2}I$ **D** $\frac{9}{4}I$