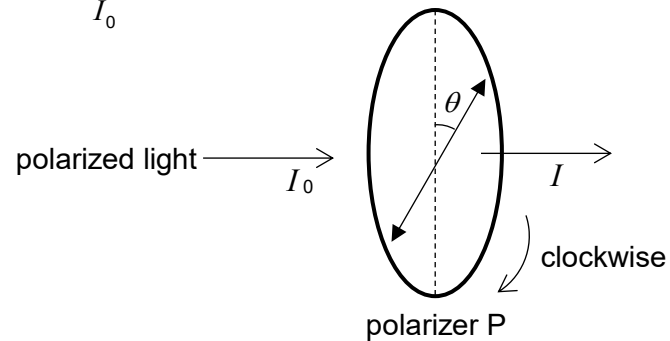


- 16** A beam of vertically polarised light of intensity  $I_0$  is incident on a polariser P. The axis of polarisation of P is initially at an angle  $\theta$  from the vertical. Light after passing through P has an intensity  $I$ . The ratio  $\frac{I}{I_0}$  is 0.25.



P is rotated  $30^\circ$  clockwise such that the axis of polarisation is now  $\theta + 30^\circ$  from the vertical.

What is the new ratio  $\frac{I}{I_0}$ ?

**A** 0

**B** 0.27

**C** 0.75

**D** 0.87

