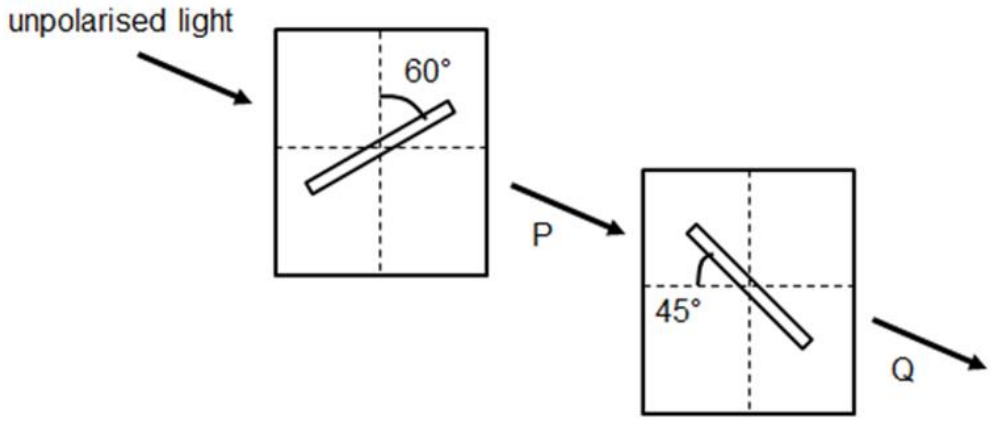
17 A beam of unpolarised light with amplitude A and intensity I is passed through two optical polarisers.

The first polariser's transmission axis is oriented at 60° to the vertical, while the second polariser's transmission axis is oriented at 45° to the horizontal.



What is the intensity of the light at P and amplitude of the light at Q?

	Intensity of light at P	Amplitude of light at Q
A	$\frac{1}{\sqrt{2}}I$	$A\sin 15^\circ$
B	$\frac{1}{\sqrt{2}}I$	$\frac{1}{2}A\sin 15^\circ$
C	$\frac{1}{2}I$	$A\sin 15^\circ$
D	$\frac{1}{2}I$	$\frac{1}{\sqrt{2}}A\sin 15^\circ$