6. A light ray enters a block of plastic and travels along the path shown above.

(a) By considering the behavior of the ray at point P, determine the speed of light in the plastic.
\[ \sin 37^\circ = \frac{3}{5}, \cos 37^\circ = \frac{4}{5}, \tan 37^\circ = \frac{3}{4} \]

(b) Determine what will happen to the light ray when it reaches point Q, using the diagram above to illustrate your conclusion.

(c) There is an air bubble in the plastic block that happens to be shaped like a plano-convex lens as shown below. Sketch what happens to parallel rays of light that strike this air bubble. Explain your reasoning.