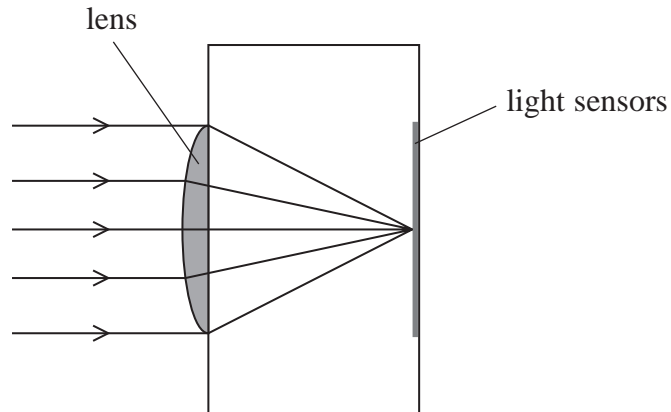


- 11** The lens of a mobile phone camera has a focal length of 4.25 mm. Light is focused onto light sensors at the back of the camera, as shown.



- (a) The camera is initially focused on an object in the far distance.

Calculate the displacement of the lens that would be required to focus on an object 25.0 cm from the camera.

(4)

Displacement of lens =

- (b) State why the lens and the light sensors in a mobile phone camera can be positioned a fixed distance apart.

(1)

(Total for Question 11 = 5 marks)