

6 A page of printed text is placed 18 cm from a converging lens of focal length 35 cm.

Fig. 6.1 is a scale diagram of the arrangement with each of the two principal focuses (focal points) of the lens labelled F.

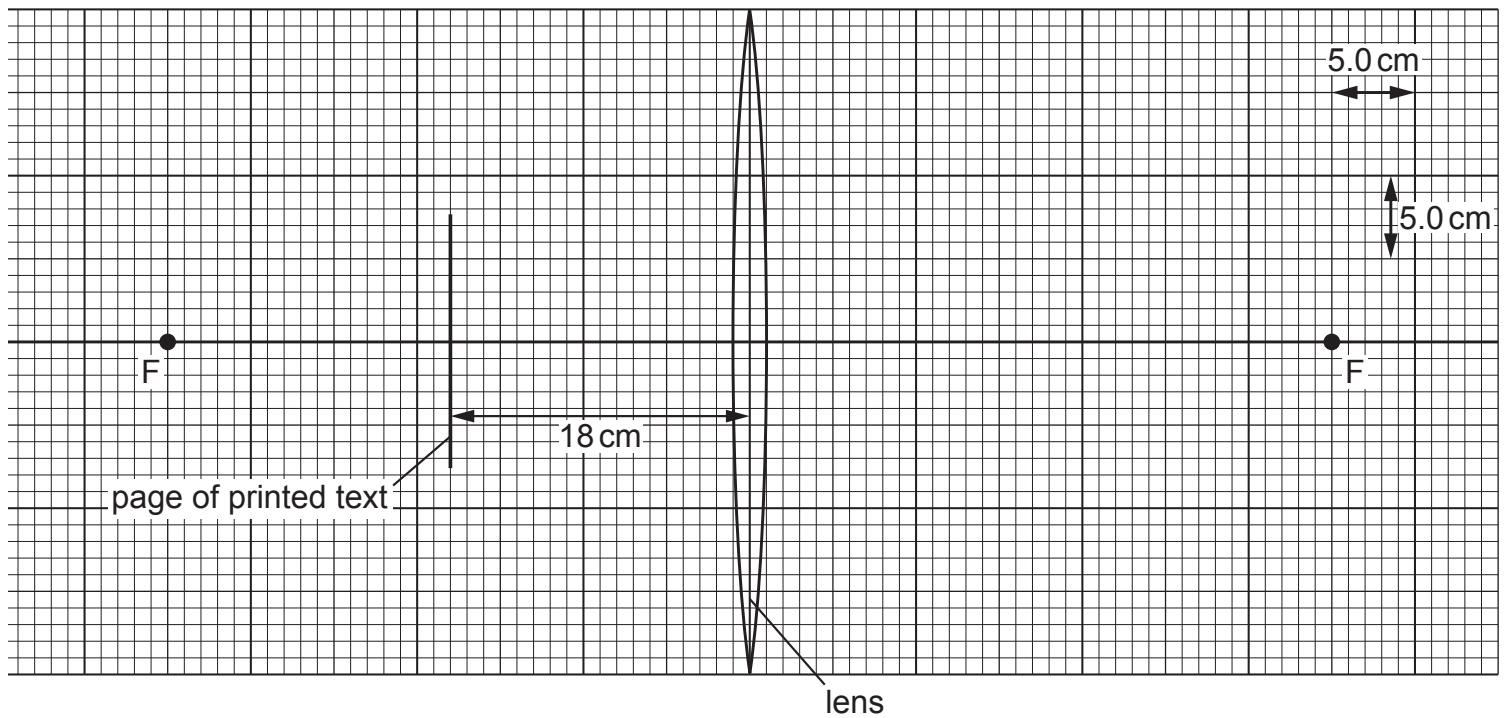


Fig. 6.1

(a) A length of 1.0 cm on the scale diagram represents an actual length of 5.0 cm.

- (i) By drawing on Fig. 6.1, locate the image of the page produced by the lens and label it I. [3]
- (ii) Using Fig. 6.1, determine the actual distance of image I from the lens.

actual distance from lens = [2]

(b) Converging lenses can be used as magnifying glasses.

State whether the image produced when a lens is used as a magnifying glass is real or virtual. Explain why.

..... [1]

(c) Suggest how someone who is long-sighted may benefit from using a converging lens.

..... [2]