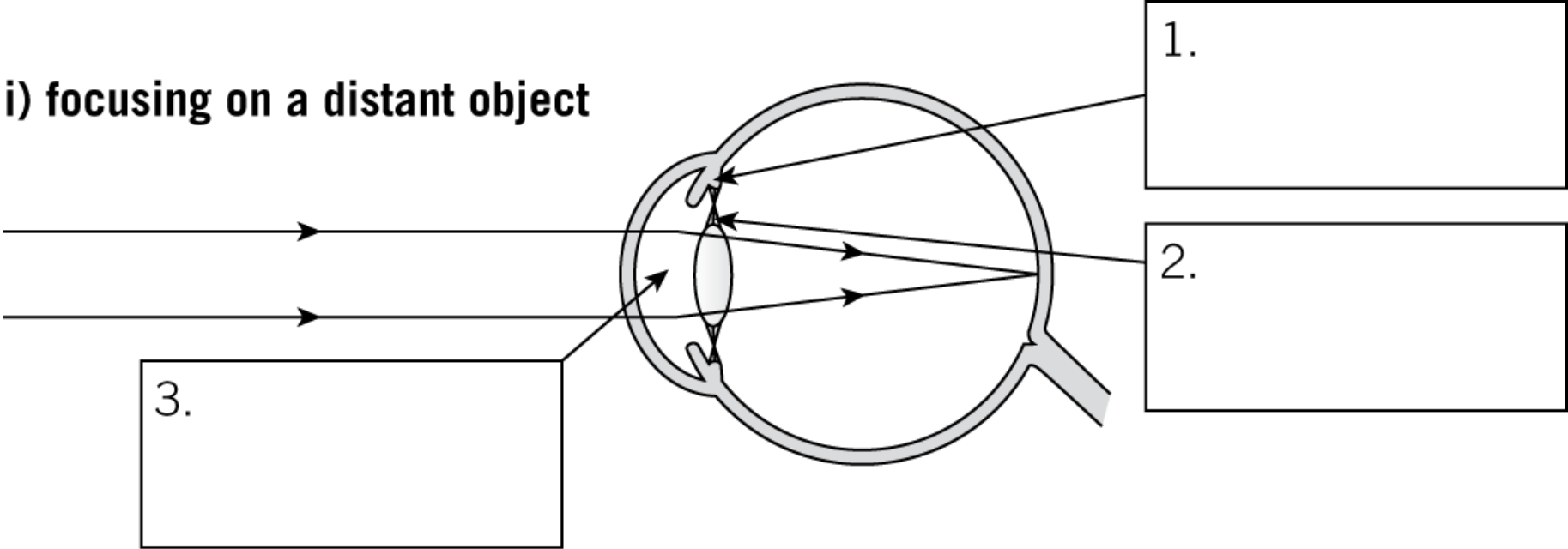
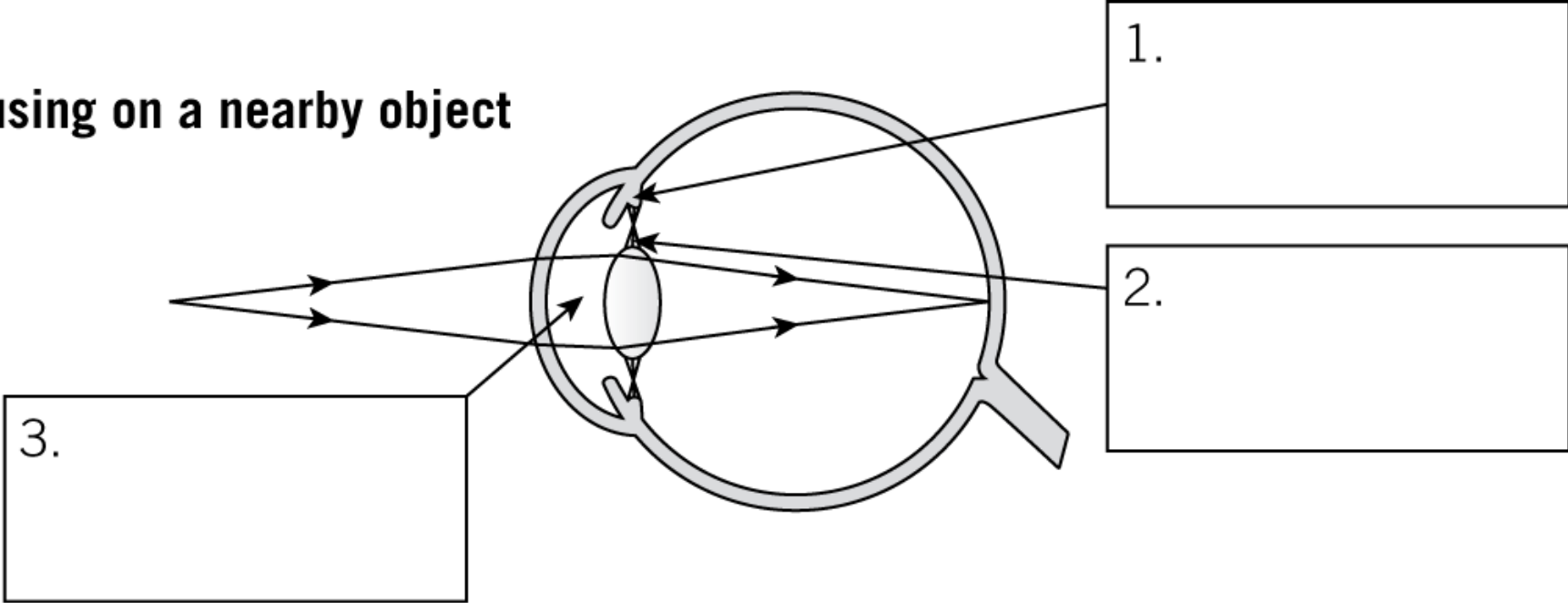


**i) focusing on a distant object**



ii) focusing on a nearby object



To focus on a distant object:

(3 marks)

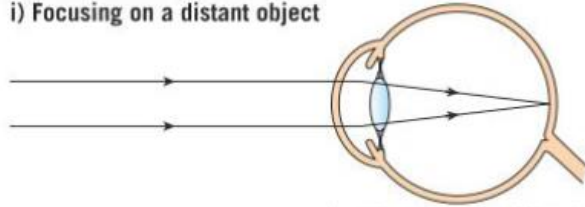
- 1 the ciliary muscles relax
- 1 the suspensory ligaments are pulled tight
- 2 the lens is then pulled thin and only slightly refracts light rays.

To focus on a nearby object:

(3 marks)

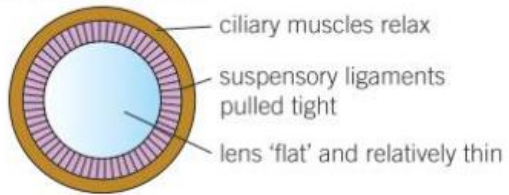
- 1 the ciliary muscles contract
- 2 the suspensory ligaments loosen
- 3 the lens is then thicker and refracts light rays strongly.

**i) Focusing on a distant object**



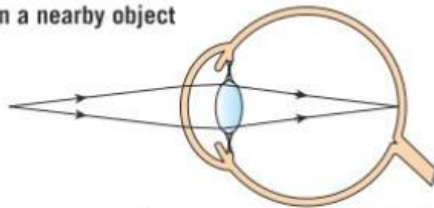
lens less convex (flatter)

**front view of lens,  
ciliary muscles and  
suspensory ligaments**

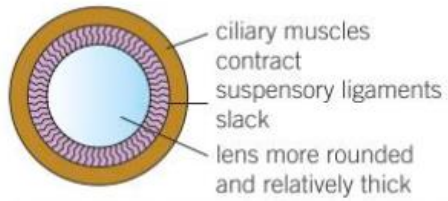


- ciliary muscles relax
- suspensory ligaments pulled tight
- lens 'flat' and relatively thin

**ii) Focusing on a nearby object**



lens more convex (rounded)



- ciliary muscles contract
- suspensory ligaments slack
- lens more rounded and relatively thick

