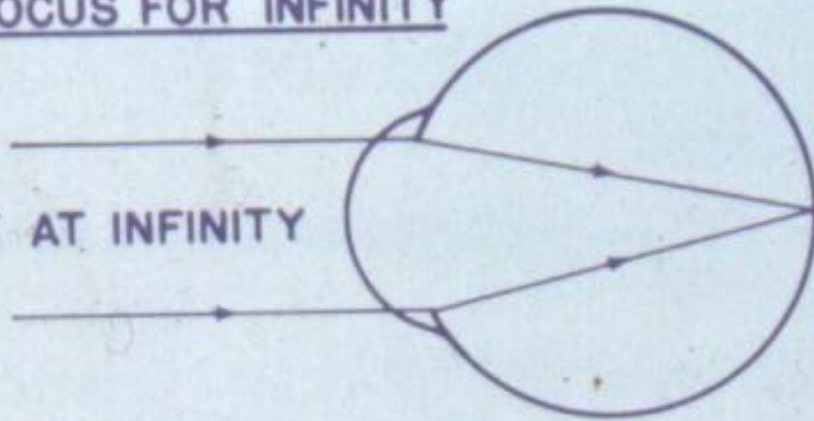


EYE IN FOCUS FOR INFINITY

A.

OBJECT AT INFINITY



SHARP IMAGE  
ON RETINA

STATIC EYE

B.

OBJECT APPROACHES

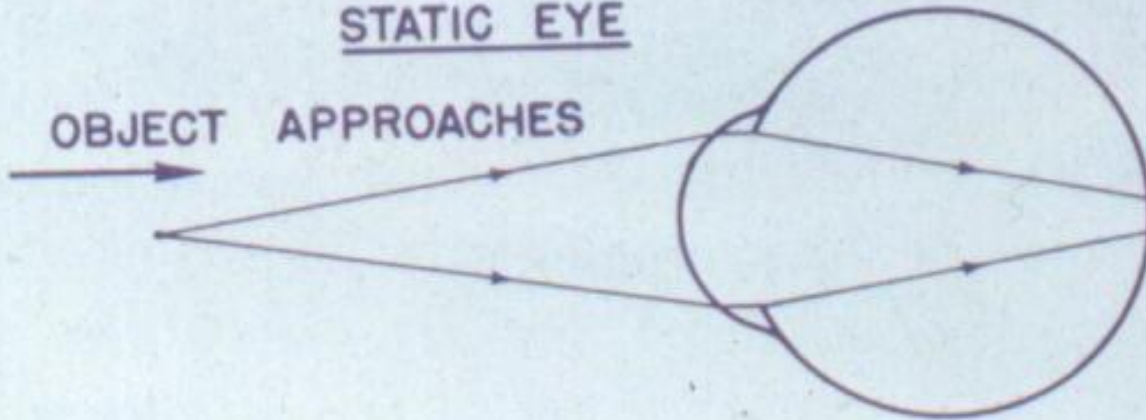


IMAGE RECEDES

, the focus is in front of the retina (Fig 8), and diver-  
ear object come to focus on the retina (Fig 9).

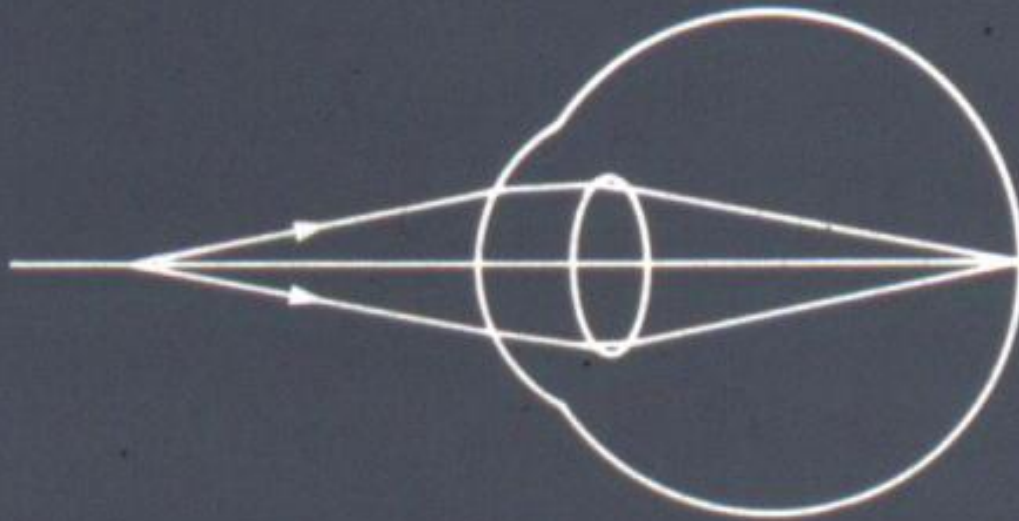


FIG 9—Near focus of a myopic eye.

eropia, the focus is behind the retina (Fig 10)

a. Myopia. In myopia, the focus is in front of the retina. Parallel rays from a near object converge before reaching the retina.

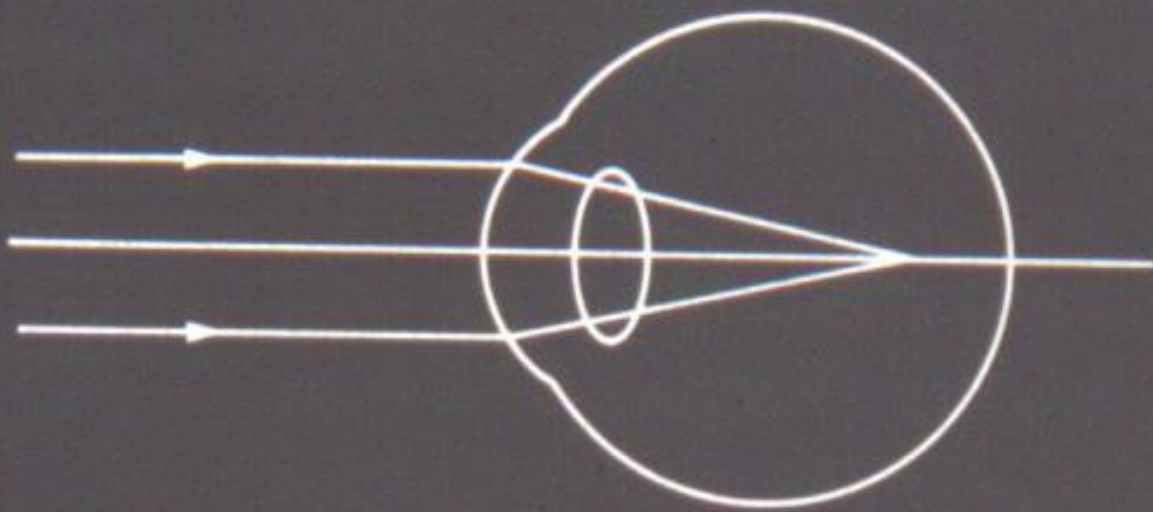
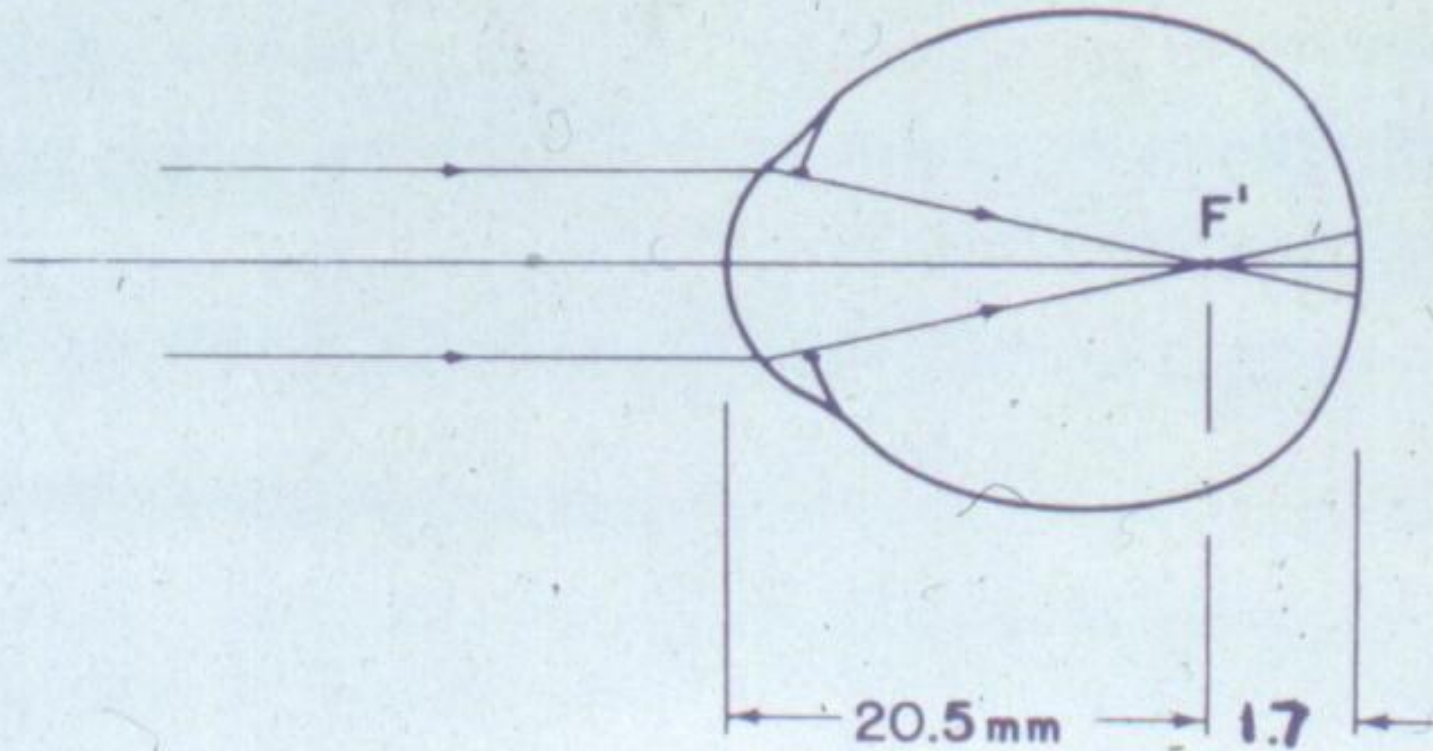


FIG 8—Myopia.

FIG

REFRACTIVE MYOPIC EYE



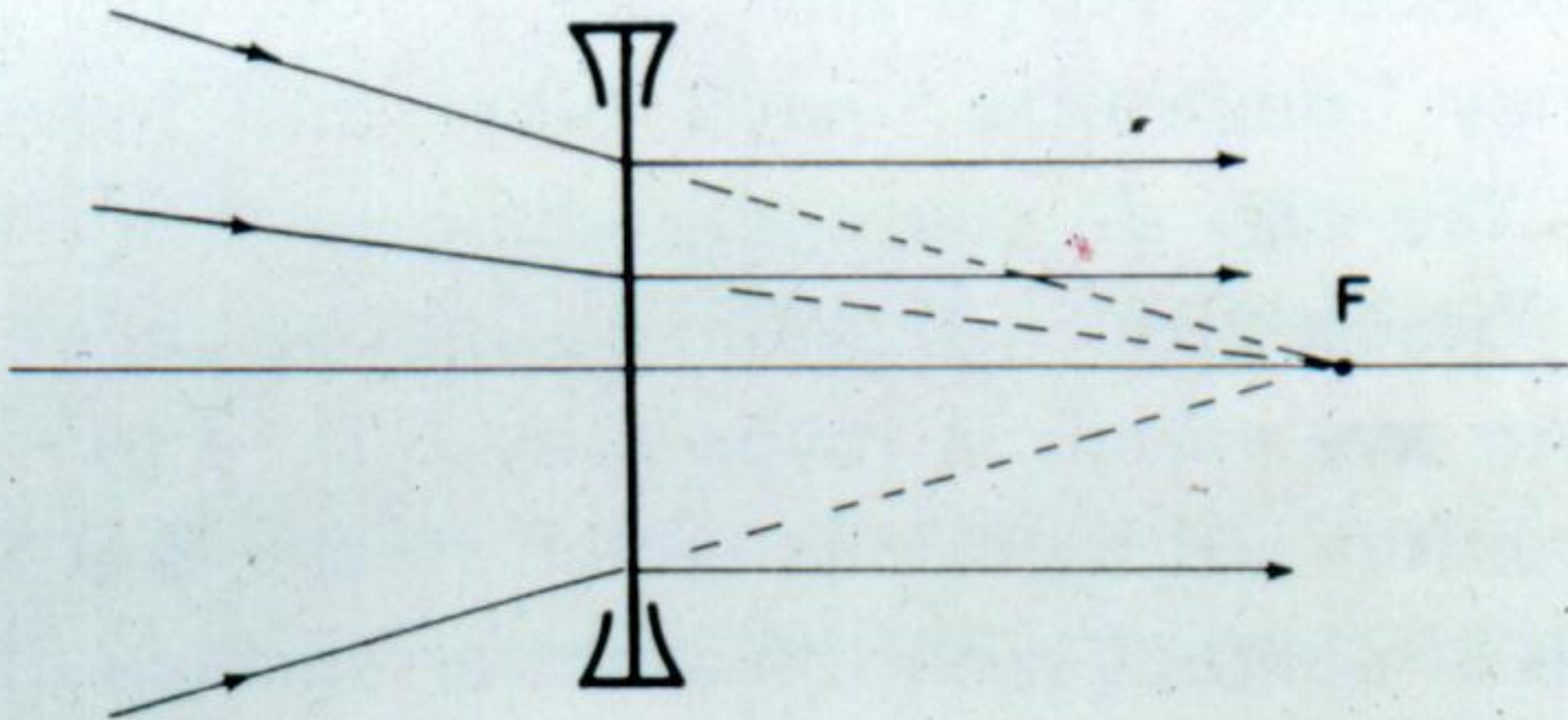


FIG 9—Myopia.

FIG 9—Near focus of a myopic

Hyperopia. In hyperopia, the focus is behind the retina

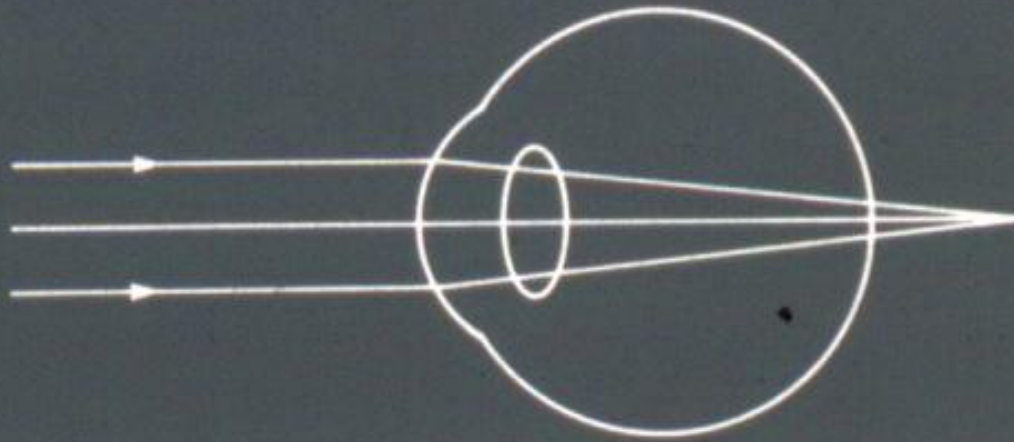
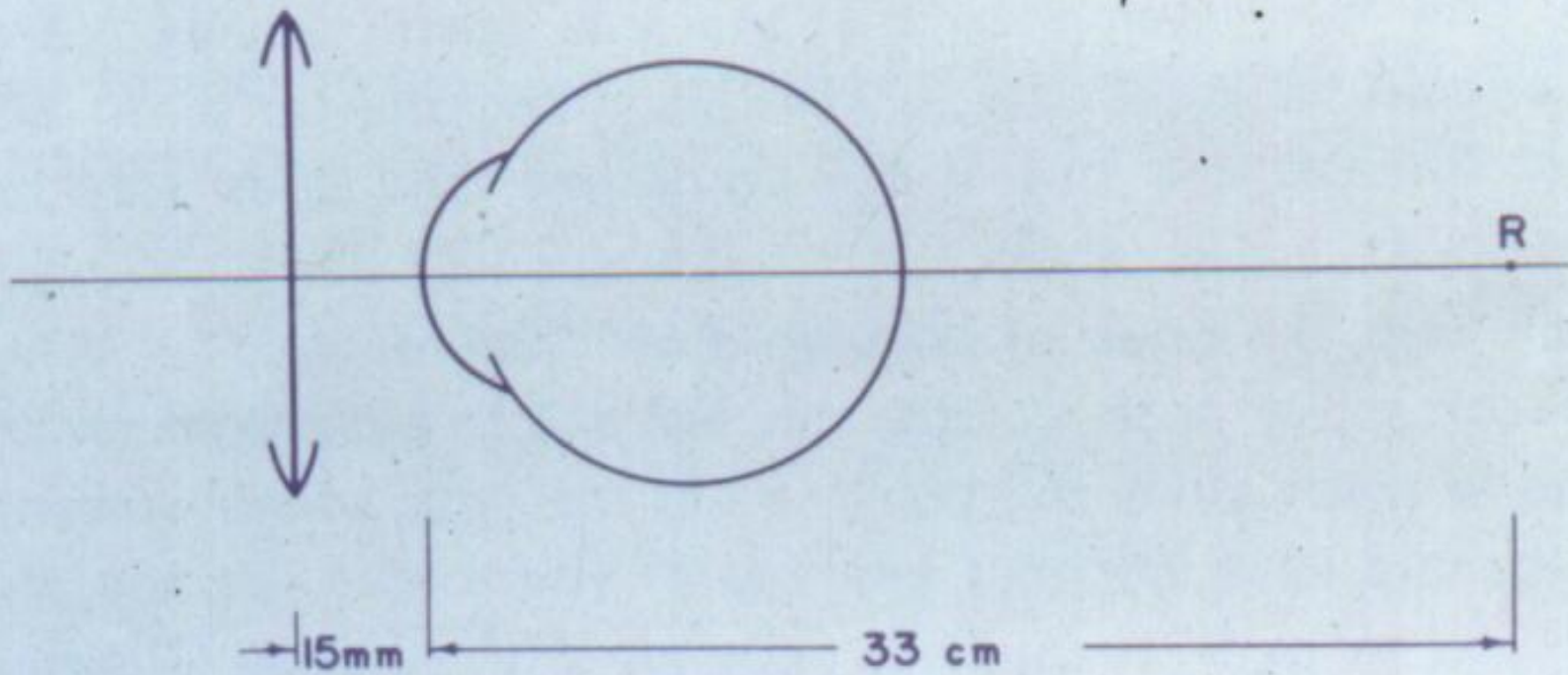
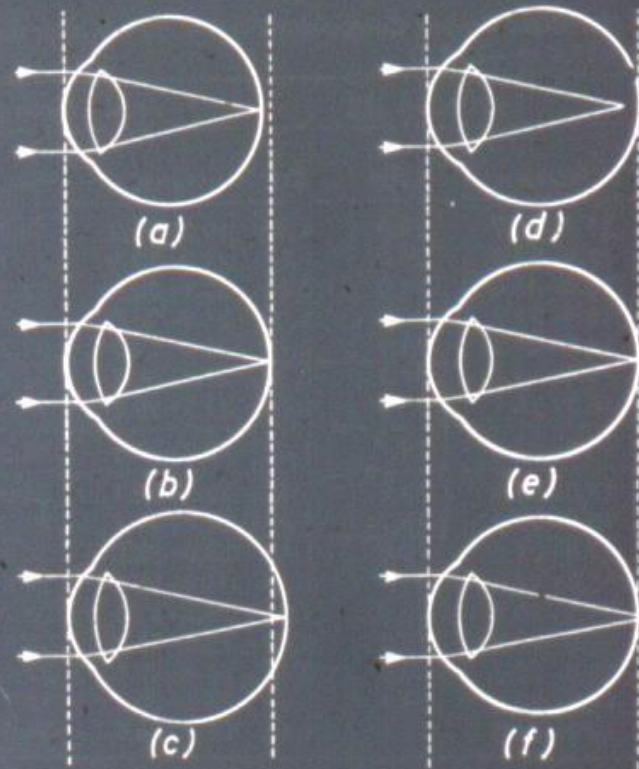


FIG 10—Hyperopia.

... that ... 16 ... 61 ... unless the ...





**Fig 34-5.** The significance of correlation in emmetropia and ametropia: (a), (b), (c) emmetropic eyes possessing unequal lengths; (d), (e), (f) eyes with identical axis lengths but markedly different refractions. (From Sorsby A, Benjamin B, Davey JB, Sheridan M, Tanner JM: Emmetropia and Its Aberrations. Med Res Counc Spec Rep Ser 293:1, 1957.)



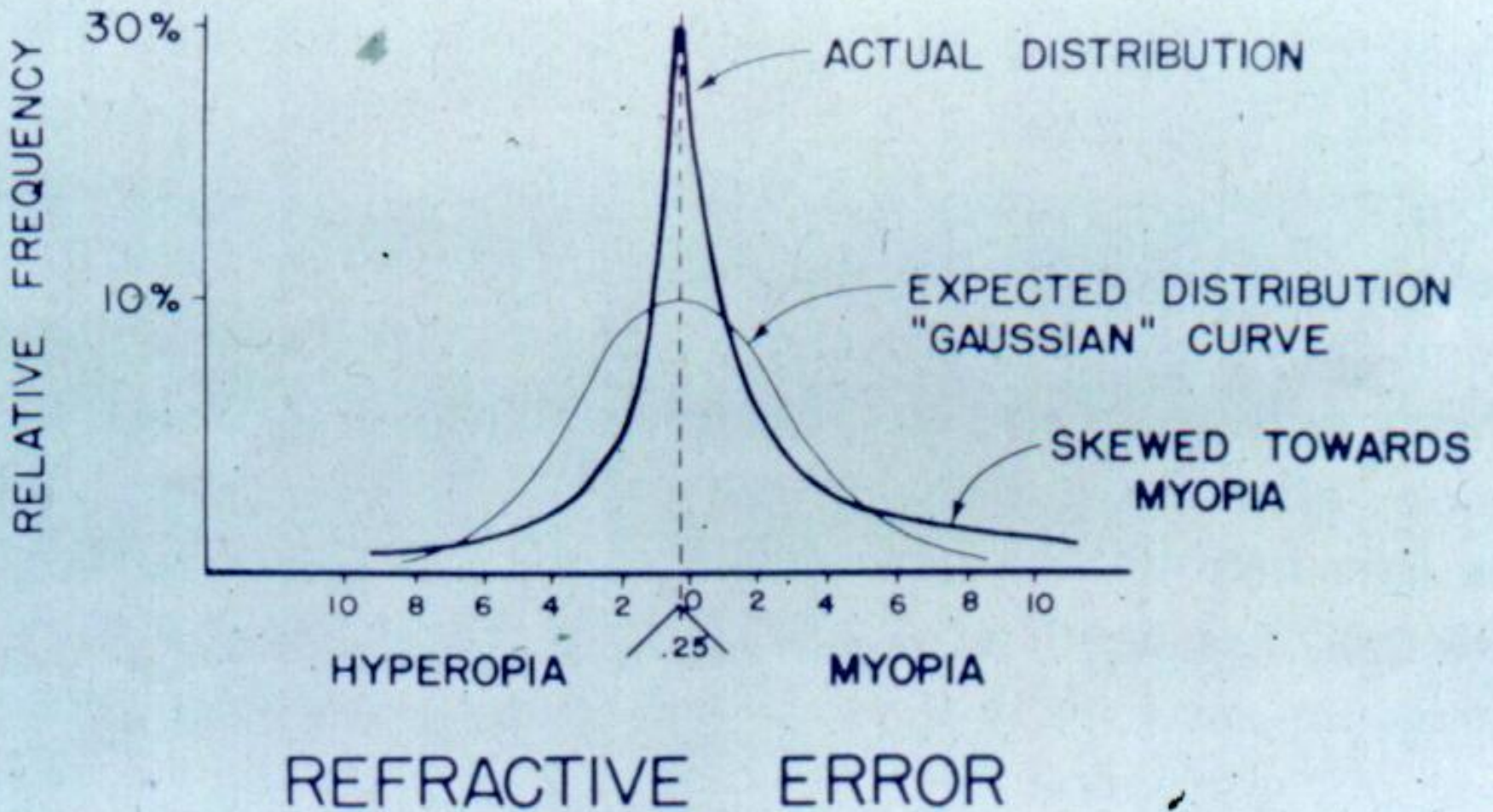
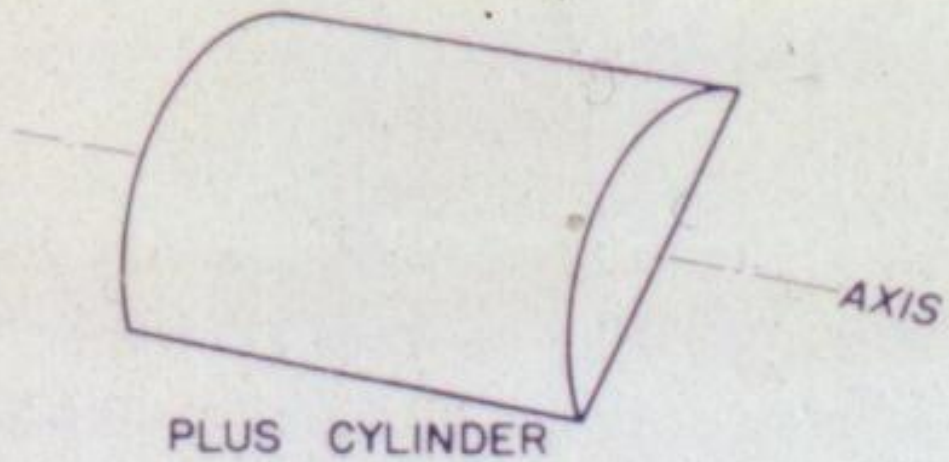


TABLE III

ACCOMMODATION LOSS WITH AGE (Donder's Table)

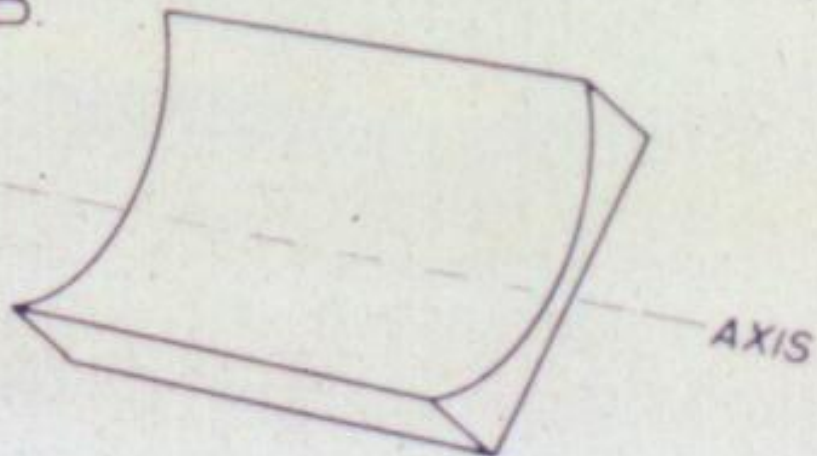
Age in years	1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Total accommodation (overall amplitude) in diopters	18	16	14	12	10	8.5	7.0	5.5	4.5	3.5	2.5	1.75	1.00	.75	.25	.00

A.

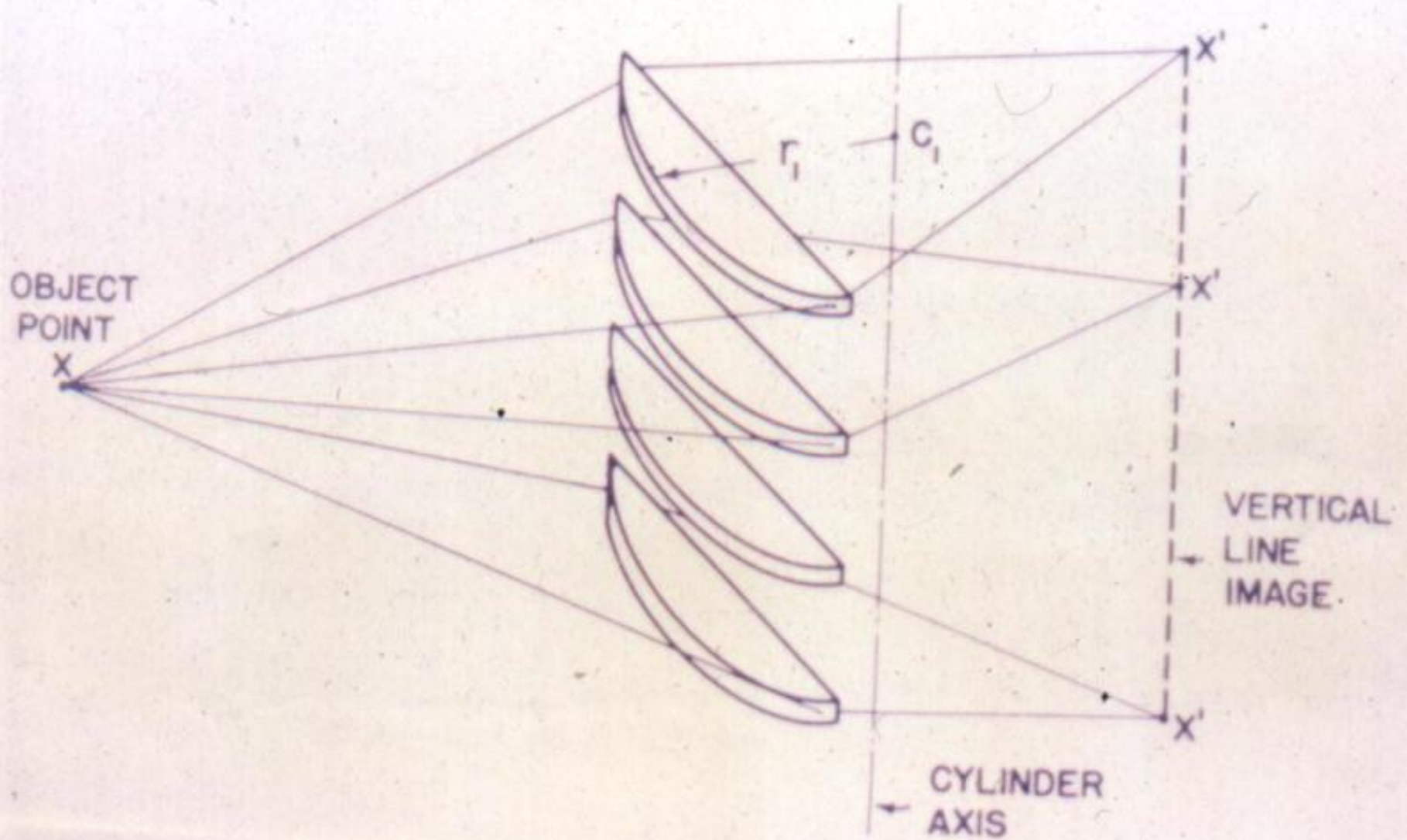


PLUS CYLINDER

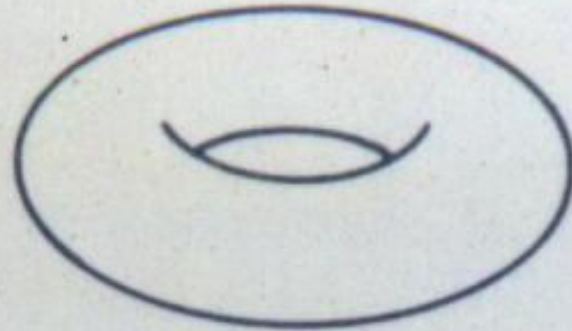
B.



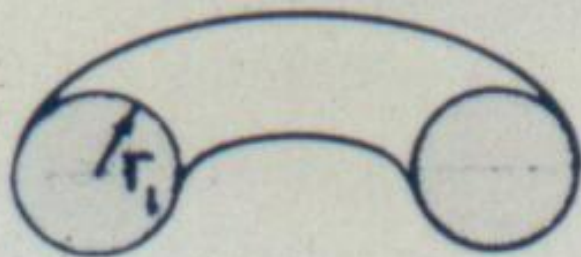
MINUS CYLINDER



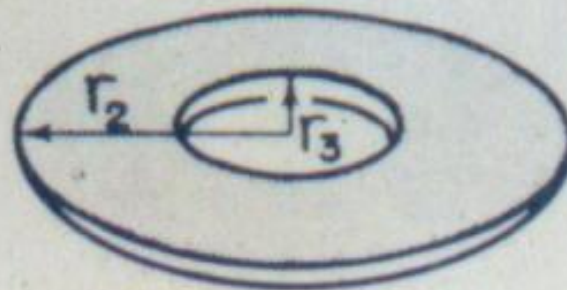
A. WHOLE



B. VERTICAL SECTION



C. HORIZONTAL SECTION



correcting procedures causes the central portion of the cornea to flatten more in one meridian than in the other. Significant work must be done to make results predictable, and long-term risks are still unknown.



FIG 15—A. Fyodorov radial keratotomy with T-cut at  $90^\circ$ . Note the slight off-set of the T-cut to avoid poor healing. B. Troutman relaxing incision at  $90^\circ$ . C. Ruiz procedure centered at  $90^\circ$ . Note that the tangential cuts of the stepladder do not connect with the radial cuts. Each of the three procedures shown would result in more flattening at  $90^\circ$ .

2. *Wedge resections.* High amounts of corneal astigmatism, particularly following keratoplasty, can be corrected by steepening the flattest meridian to match the steepest meridian. The principle is to remove an arc-shaped full thickness wedge of peripheral cornea in the flattest meridian and suture the edges together. Nominally, for each 0.1 mm removed, 1 diopter of steepen