- 2. reciprocal inequalities = (c)
 developed capabilities = (e)
 innate potentialities = (a)
- 3. (b) and (e)
- 5. (a) 99.7% (b) When np ≥ 10 and n(1-p) ≥ 10
- 6. (c) It's an estimator of μ , the population mean difference in corneal thickness between an eye with glaucoma and a healthy eye.
 - (f) A bootstrap sample here satisfies these criteria.

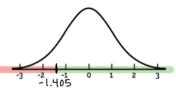
 draw from the original with replacement.

 obtain a sample of the same size as original (violated here)
 - (9) A 99% bootstrap percentile interval should extend from the 0.5-percentile to the 99.5-percentile. With 1000 points, these percentiles are 5 away from the two ends. Estimating, that is approximately (-11.1, 5.8).
 - (h) qt(0,995, df = 7)
 - (i) $-2.125 \pm (3.4995) \frac{9.5982}{\sqrt{8}}$, or (-14.00, 9.75)
- 7. (a) gnorm (0.08)

(b)
$$\hat{p} = \frac{33}{100} = 0.33$$
, $E(\hat{p}) = p = 0.35$, $V_{ar}(\hat{p}) = \sqrt{\frac{p(1-p)}{n}} = \sqrt{\frac{(.35)(.65)}{100}} = 0.047697$

$$\Rightarrow Z = \frac{\hat{p} - p}{\sqrt{p(1-p)/n}} = \frac{0.33 - 0.35}{0.047697} = -0.4193$$

- (c) prorm (-0.4193) or phinom (33, 100, 0.35)
- (d) (iii)
- (e) The rejection region is Z < -1.405, and so Z = -0.4193 is in the nonrejection region. We fail to reject H_0 .



(f) We reject Ho when the Z-scare $Z = \frac{0.33 - 0.35}{\sqrt{(.35)(.65)/n}} < -1.4051 \Rightarrow \left(\frac{0.02}{1.4051}\right)^2 > \frac{(0.35)(0.65)}{n}$

$$\Rightarrow n > \frac{(0.35)(0.65)}{(0.02/1.4051)^2} = 1122.89$$
So $n = 1123$
is minimal.