

Answer Key to Practice Test 2 - STA 308

1.
 - a. 0.0668
 - b. 0.3409
 - c. 0.9198
 - d. 0.0359 or 3.59%
 - e. 584
 - f.
 - i. 500
 - ii. 25
 - iii. Exactly. Scores follow a normal distribution.
 - iv. 0.0000

2.
 - a. (4.85,5.55)
 - b. 0.35 mg/dl (to 4 decimals places: 0.3461 mg/dl)
 - c. With a probability of 0.99, the true mean level of phosphours in the blood of dialysis patients falls between 4.85 and 5.55 mg/dl
 - d. Narrower. Less confidence is used to calculate the confidence interval
 - e. 60

3.
 - a. $H_0: \mu=100$, $H_a: \mu<100$
 - b. -1.6971
 - c. Critical Value: -2.326
Rejection Region: $Z \leq -2.326$
Acceptance Region: $Z > -2.326$
 - d. Do not reject H_0 . The data does not support the hypothesis that the true mean cyanide level in soil in the Netherlands does not exceed 100 mg/kg