Sol: 18.1 Population mean $\mu_0 = 100$

Sample mean $\bar{x} = 108$

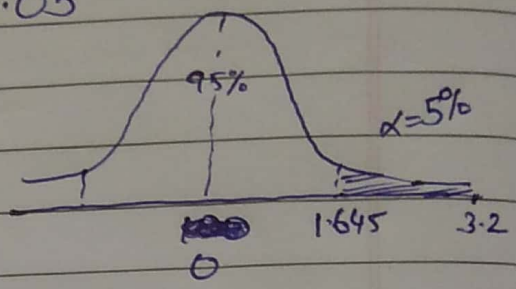
$N = 36, \quad \sigma = 15$

Let us assume Null hypothesis is true

$H_0: \mu_0 = 100$

Also let us assume $\alpha = 0.05$

$P(Z < 95) = 1.645$



From Test statics formulae

$$Z = \frac{\bar{x} - \mu_0}{\left(\frac{\sigma}{\sqrt{N}}\right)}$$

$$Z = \frac{108 - 100}{\left(15/\sqrt{36}\right)} = \frac{8 \times 6}{15} = 3.2$$

from this we can see that Z value for our test statics is greater and it falls under the area of rejection in our normal distribution graph.

Hence, we reject our null Hypothesis

Thus raw cornstarch had an effect.