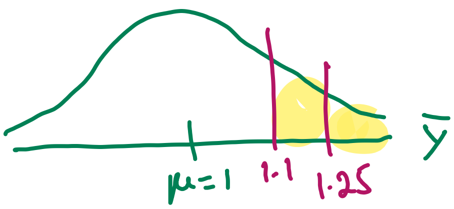
$\bar{Y}$ has an approximately normal distribution with mean $= \mu = 1$ and variance $= \frac{\sigma^2}{n} = \frac{1}{70}$.



Since 1.1 and 1.25 are higher than $\mu=1$, let's find the $P(\bar{Y}>1.1)$ and $P(\bar{Y}>1.25)$ to make a decision.

Since σ^2 is known, use the normal distribution to compute these.

$P(\bar{Y}>1.1) = 0.21039$ use normalcdf$(1.1, 10^{99}, 1, \sqrt{1/70})$

In R, use pnorm(1.1, 1, sqrt(1/70), lower.tail=FALSE)

Using Table 4, compute $z = \dfrac{1.1-1}{\sqrt{\frac{1}{70}}} = 0.84$ and then

$P(\bar{Y}>1.1) = P(Z>0.84) = 0.2005$

$P(\bar{Y}>1.25) = 0.018235$ use normalcdf$(1.25, 10^{99}, 1, \sqrt{1/70})$

In R, use pnorm(1.25, 1, sqrt(1/70), lower.tail=FALSE)

Using Table 4, compute $Z = \dfrac{1.25-1}{\sqrt{\frac{1}{70}}} = 2.09$, and the

$P(\bar{Y}>1.25) = P(Z>2.09) = 0.0183$

It is rare that the average maintenance time per unit is more than 1.25 hours.

It is somewhat likely (unlikely) that the average maintenance time per unit is more than 1.1 hours.

Therefore, according to these information, it is safe to go with 1.25 hours per unit.

If $P(\bar{Y}>1.25)$ was almost zero, then pick a value between 1.1 and 1.25.