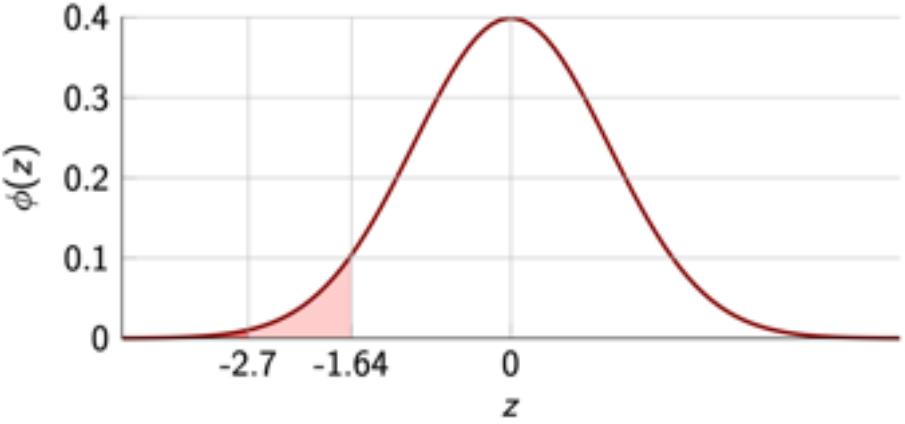
p-value in a One-sided Lower-Tailed Test ($H_1: \theta < \theta_0$):

- With known variance, the p-value is $\Phi(z)$.
- With unknown variance, the p-value is $F(t)$, where $F(\cdot)$ is the cdf of the Student's t distribution.



If $z = -2.7$ and $H_1 : \theta < \theta_0$ then $p = 0.003467$. The lighter shading is R for $\alpha = 0.05$.