

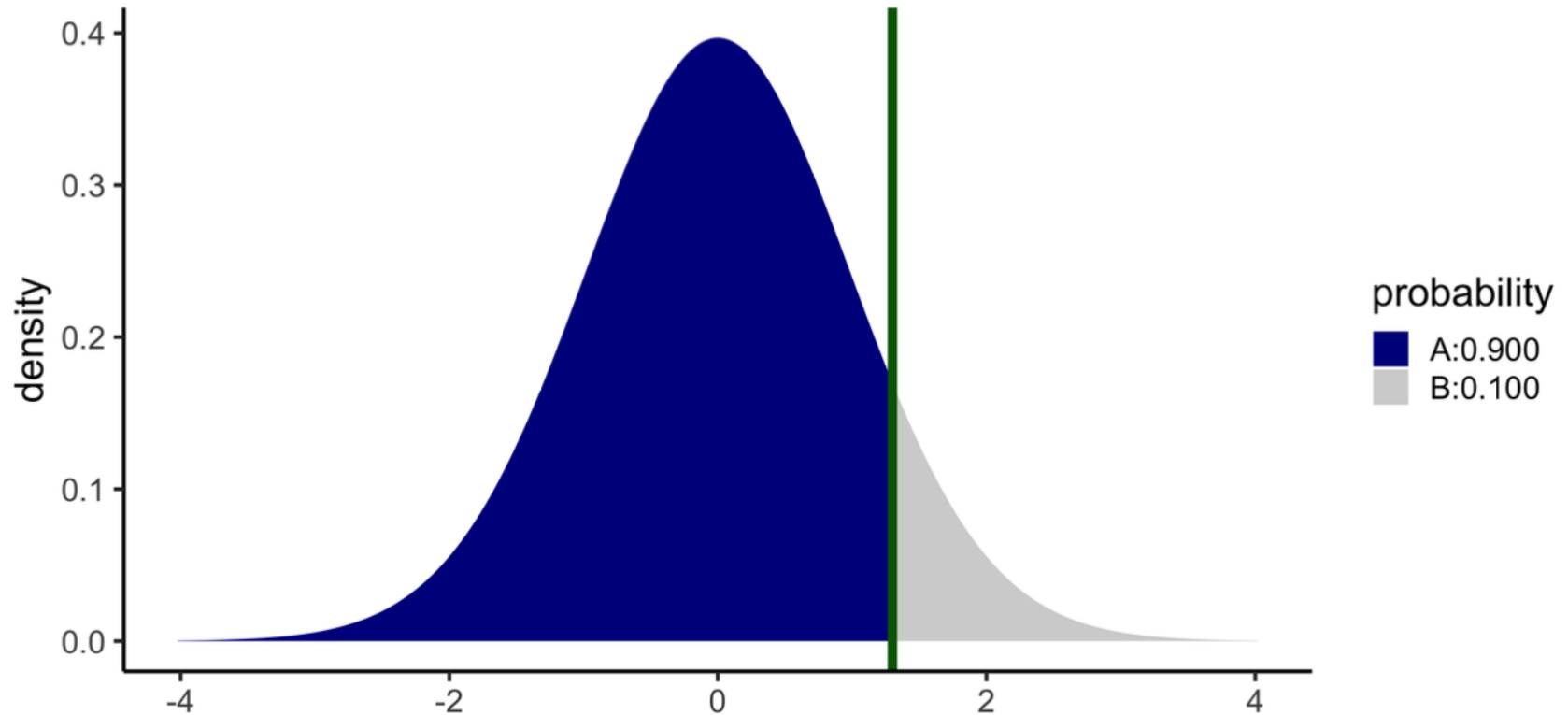
Review of p-value computation

Data Analysis for Psychology in R1

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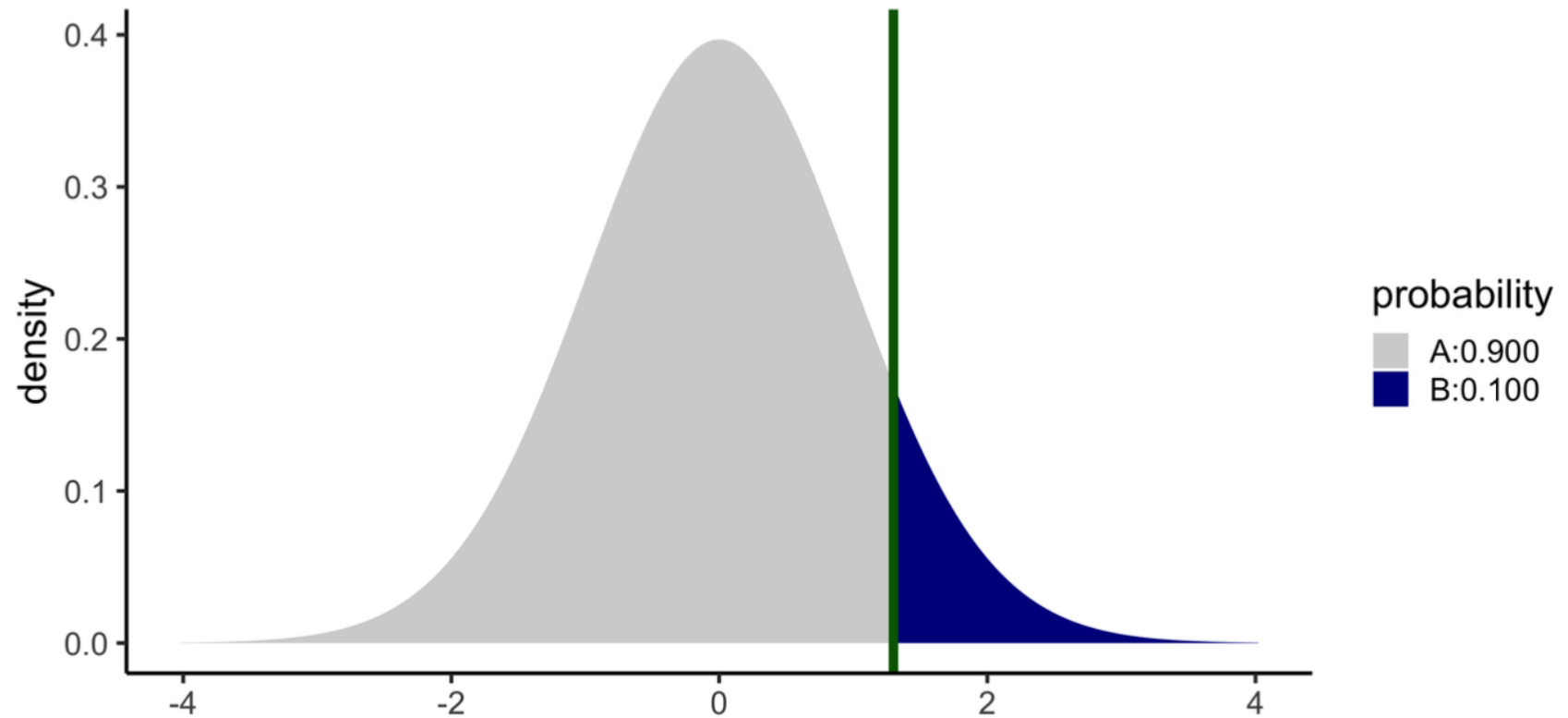
What if the observed t-statistic is positive?

If $H_1: \mu < \mu_0$ and $t_{\text{obs}} = t = +1.3$, $\text{pvalue} = A$



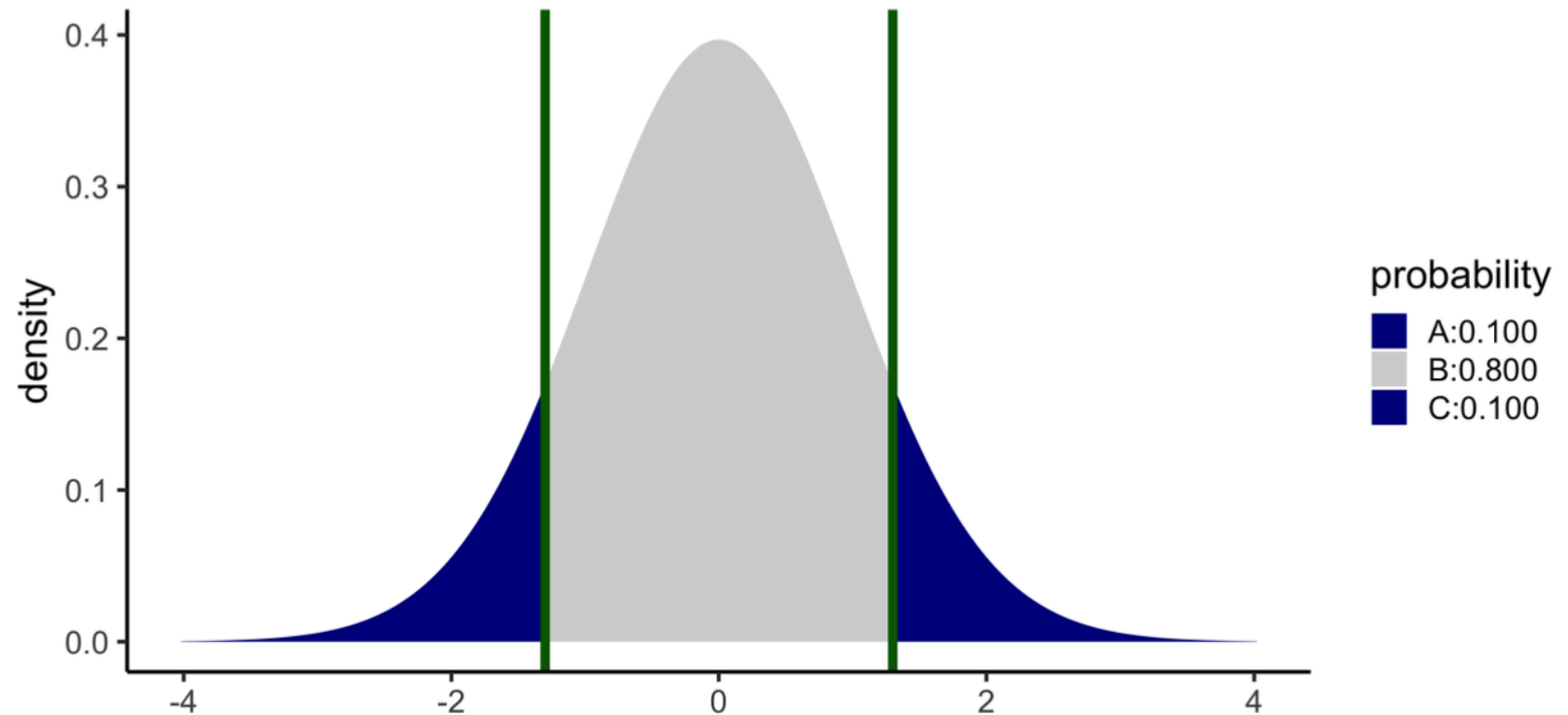
`pt(tobs, df = n-1, lower.tail = TRUE)`

If $H_1: \mu > \mu_0$ and $t_{\text{obs}} = t = +1.3$, $\text{pvalue} = B$



`pt(tobs, df = n-1, lower.tail = FALSE)`

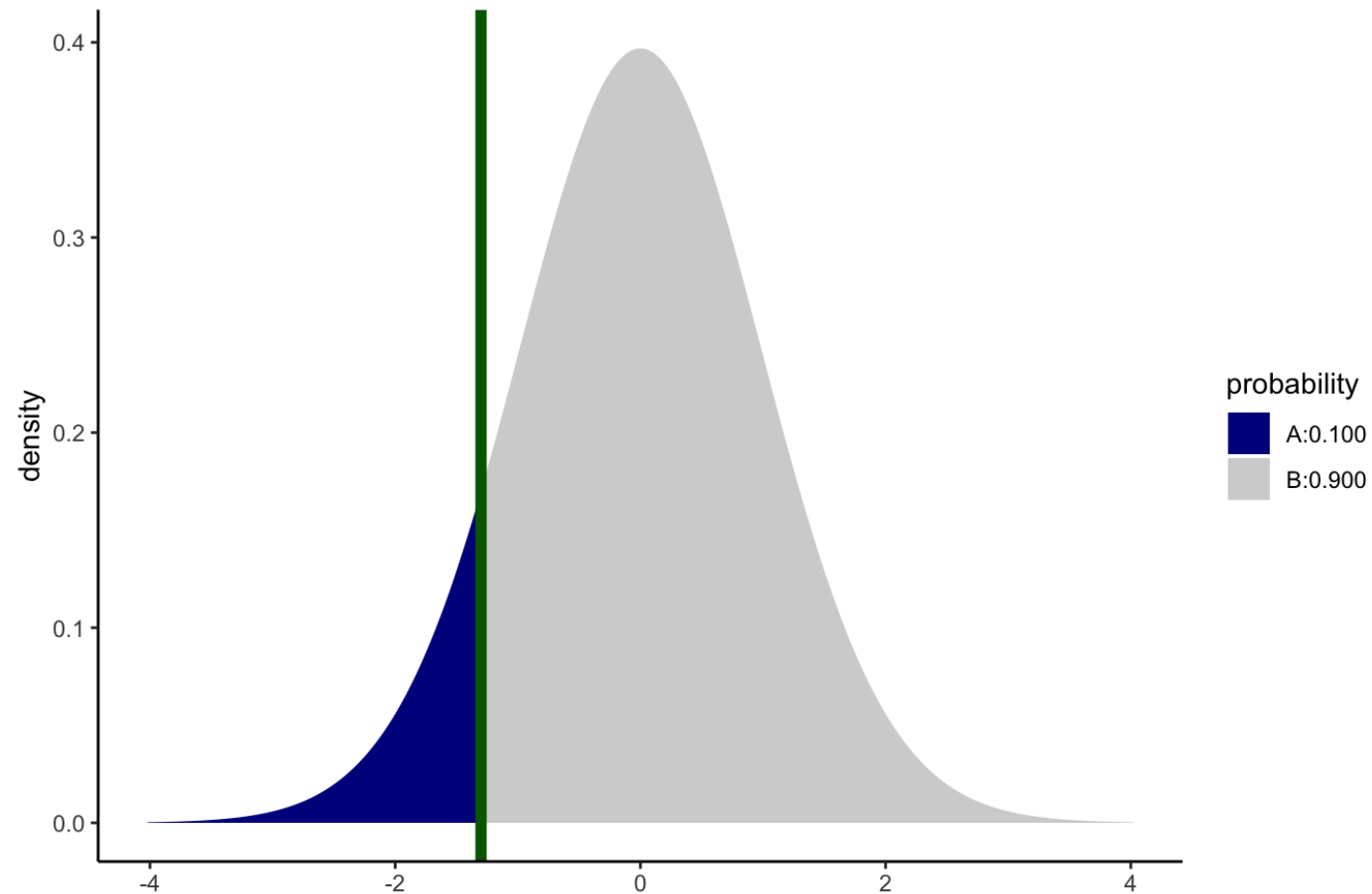
If $H_1: \mu \neq \mu_0$ and $t_{\text{obs}} = t = +1.3$, $p\text{value} = A + C$



$2 * pt(\text{abs}(t_{\text{obs}}), df = n-1, \text{lower.tail} = \text{FALSE})$

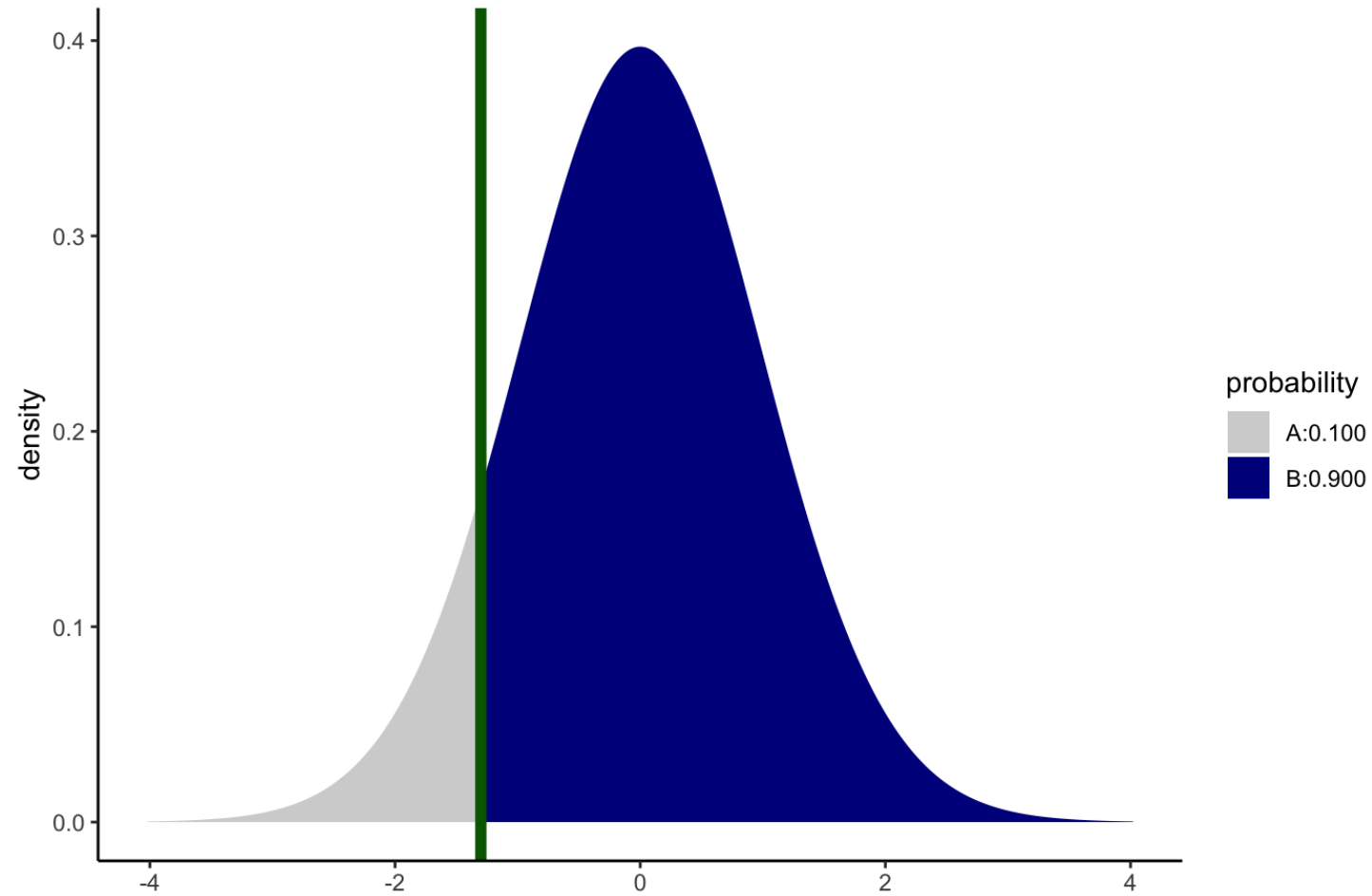
What if the observed t-statistic is negative?

If $H_1: \mu < \mu_0$ and $t_{\text{obs}} = t = -1.3$, $p\text{value} = A$



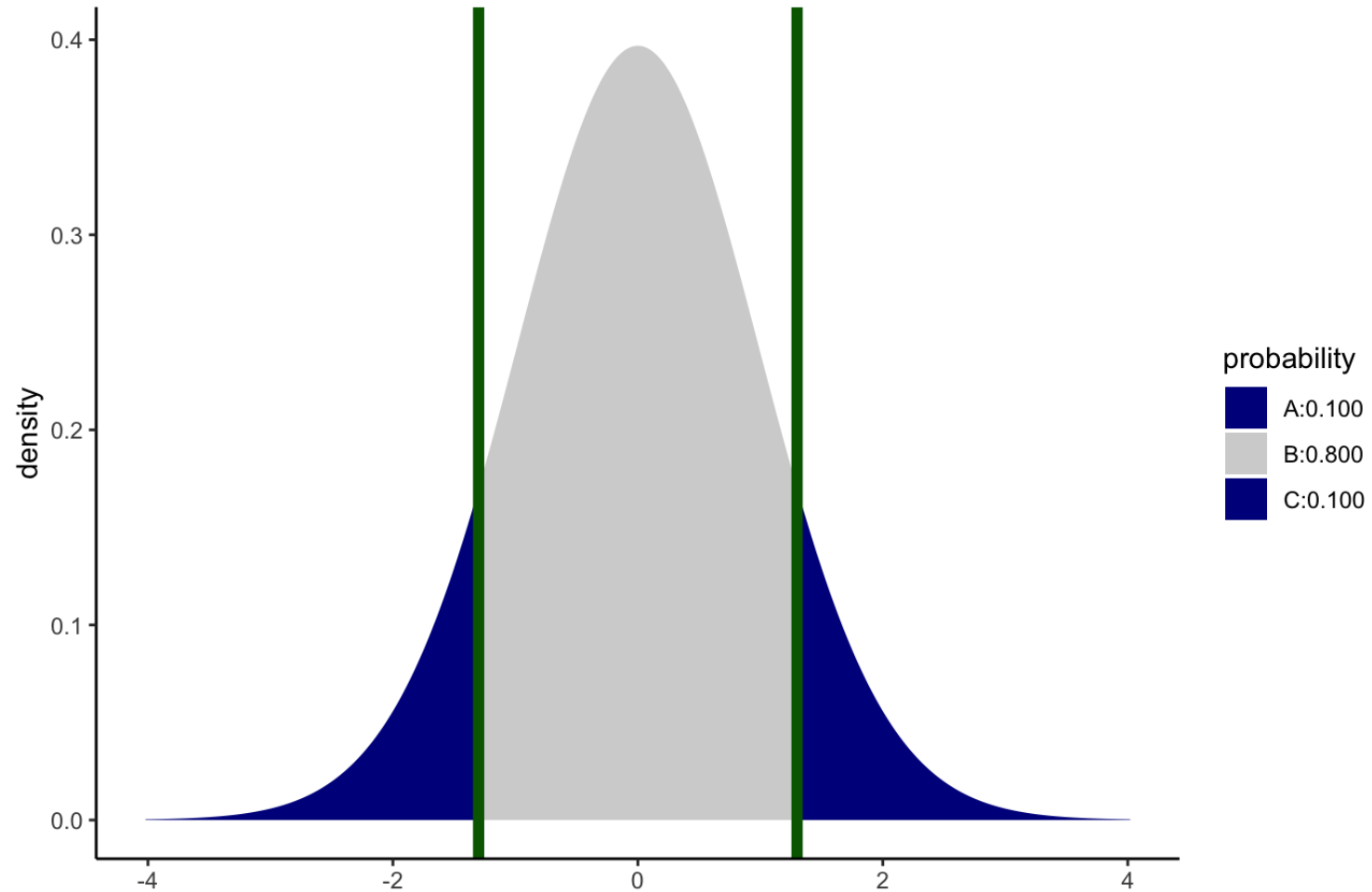
`pt(tobs, df = n-1, lower.tail = TRUE)`

If $H_1: \mu > \mu_0$ and $\text{tobs} = t = -1.3$, $\text{pvalue} = B$



`pt(tobs, df = n-1, lower.tail = FALSE)`

If $H_1: \mu \neq \mu_0$ and $t_{\text{obs}} = t = -1.3$, $\text{pvalue} = A+C$



$2 * \text{pt}(\text{abs}(t_{\text{obs}}), \text{df} = n-1, \text{lower.tail} = \text{FALSE})$