Section 6: QQ – plots

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Motivation

- QQ-plots are useful to compare distributions, and not only the means, variance or median.
- The KS-test can be presented in QQ-plot as the largest deviation from the 45 degree line.
- In the next figures we are going to compare two distributions, for example the treatment and the control, and try to guess from which distributions was the data generated.
\textit{treat} \sim N(0,1) \text{ and } \textit{control} \sim N(0,1)
treat $\sim N(1, 1)$ and control $\sim N(0, 1)$
treat $\sim N(0, 2)$ and control $\sim N(0, 1)$
$treat \sim Unif(0, 1)$ and $control \sim Unif(0, 1)$
treat \sim \text{Unif}(0,1) \text{ and } control \sim \text{Unif}(-0.5,1.5)
treat $\sim \text{Unif}(0, 1)$ and control $\sim \text{Unif}(-0.5, 1.5)$
treat $\sim \exp(\lambda = 1)$ and control $\sim N(1, 1)$
$treat \sim \exp(\lambda = 1)$ and $control \sim N(1, 1)$