# 6.2 Discretizing a Continuous Prior Density

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6.2 Discretizing a Continuous Prior Density

Here we need to discretize the density by considering only the discrete θ values at the middles of each interval, and set the probability mass at that value to be the area of the corresponding rectangle. Also, we need to make sure that the resulting discrete probabilities sum to exactly 1.0. Then we can apply the discrete version of Bayes' rule.
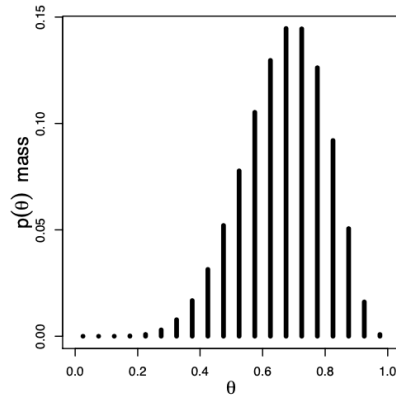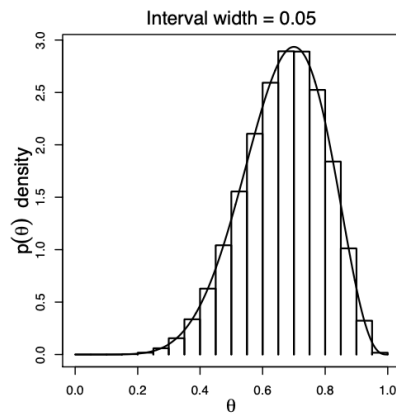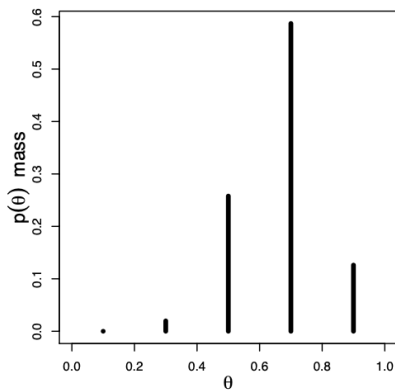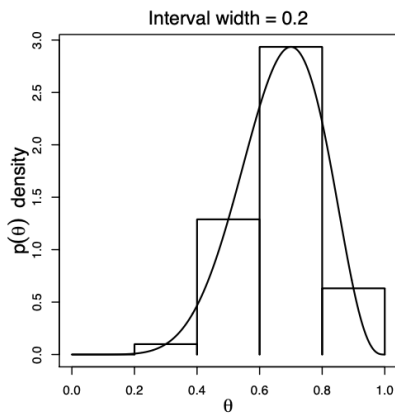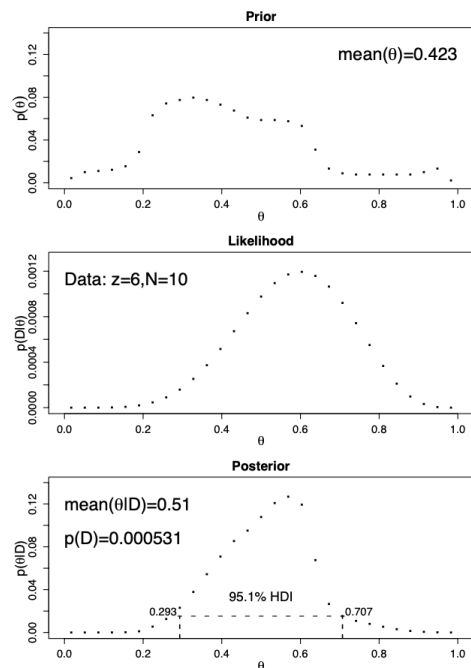
6.2.1 Examples Using Discretized Priors

The plot shows a uniform prior discretized. Notice that the prior is only defined at discrete points, thus the likelihood and posterior are only defined at those points.
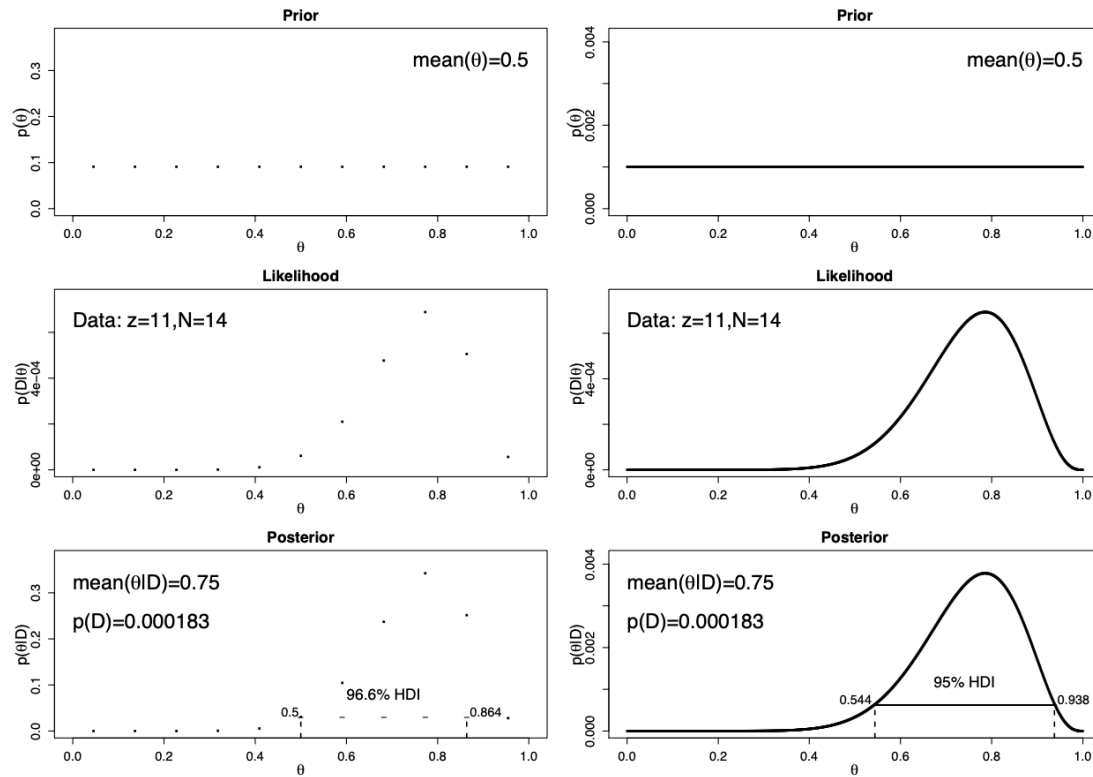
The left side shows discrete points, whereas the right side shows continuous courses.

Example of an arbitrarily-shaped discretized prior. No beta function can accurately imitate this prior.