Practicals to chapter 3

1) **The posterior distribution of the mean of a normal distribution with known variance**.

The R-function triplot.normal.knownvariance from the R-package blmeco plots the prior, the likelihood and the posterior of θ. Play with different sample sizes, and prior distributions, to get a feeling about how the posterior distribution combines the prior and the data.

2) Here are measurements of biomasses of two different plant species (a and b). The samples are independent.

```
a <- c(10.3, 11.3, 9.9, 8.5, 9.7, 8.4, 10.1)
b <- c(1.0, 17.6, 21.8, 14.1, 8.4, 12.0, 10.3, 13.0, 22.7)
```
We are interested in the ratio between the biomass measurements of the two species.

Give an estimate for the biomass ratio with 95% CrI. Give also a posterior probability for the hypothesis that the species b has a 1.5*larger biomass than species a.