

Exercise 1. Use the method presented in Section 3.4. on p. 30 in the course material (see also the remark on the first couple of lines in Section 3.5.2) to create a naive rejection sampler for the unnormalized density  $m(x)$ , such that

$$f(x) \propto m(x) = \exp(-2x^3) \tag{1}$$

in the interval  $[-1, 2]$ . Investigate the effect of the height of the majorant, i.e. the height of the box in which  $m(x)$  is enclosed, regarding the sampler efficiency (acceptance rate).