STA220H1 Practice Problems – Sampling Distribution Module

1. For each of the following situations, indicate whether the parameter of interest is most likely to be a mean (μ) or a proportion (p).

   (a) In a survey, 100 university students are asked how many hours per week they spend on the internet.

   (b) In a survey, 100 university students are asked what percentage of the time they spend on the internet is spent on social media.

   (c) In a survey, 100 university students are asked whether or not they are Facebook users.

   (d) The body temperature of a random sample of 100 University of Toronto students is measured.

   (e) An epidemiologist is chooses a simple random sample of 200 women from a certain population in order to estimate the prevalence of oral contraceptive use in the population.

2. Below is the probability density function for the population distribution of body temperatures and three histograms constructed from random samples from this distribution. The mean of the distribution of body temperature is 37 degrees Celsius and the standard deviation is 0.5 degrees Celsius.

