

Math 323 Section 5.1 Problems

1. The average height of a hobbit is 42 inches.
 - (a) Give an upper bound on the probability that a particular hobbit is 48 inches tall.
 - (b) The standard deviation of the height of hobbits is 2.2 inches. Find a lower bound for the probability that a particular hobbit is between 36 and 48 inches tall.
 - (c) Now assume that the distribution of hobbit heights is normal. Using a standard normal table (see p. 155 of your textbook), repeat the calculations from parts (b) and (c). How close was your probability to the true probability?