
April 18, 2013

Score _____

1. (2 points) The lengths of hospital stays are normally distributed with mean 4.8 days and standard deviation 1.4 days. About what percent of hospital stays last longer than 7 days?
2. (3 points) 38% of adult Internet users have made an online purchase. 200 adult Internet users are randomly selected.
 - (a) What is the probability that 100 or more have made an online purchase?
 - (b) What would be an usually large number of people who have made an online purchase?

3. (3 points) Suppose there are 200 typographical errors randomly distributed in a 500-page manuscript.

(a) What is the average number of typos per page?

(b) What is the probability that any given page will contain 2 or more types?

4. (2 points) The Rockefeller family is pretty wealthy, but they've decided to live with the "average joes." They are buying a home in a neighborhood where the home prices are normally distributed with mean \$319,000 and standard deviation \$18,500. Mrs. Rockefeller will only consider a house that is more expensive than 98% of the neighborhood houses. What is the cheapest house she will consider?

5. (3 points extra credit) Is this a binomial distribution? Give a clear explanation of your answer.

x	0	1	2	3
$P(x)$	0.064	0.288	0.432	0.216