

# MA 519: Homework 6

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## PROBLEM 6.1 (HANDOUT 8, # 2)

Identify the parameters  $n$  and  $p$  for each of the following binomial distributions:

- (a) # boys in a family with 5 children;
- (b) # correct answers in a multiple choice test if each question has a 5 alternatives, there are 25 questions, and the student is making guesses at random.

*SOLUTION.*

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## PROBLEM 6.2 (HANDOUT 8, # 10)

A newsboy purchases papers at 20 ¢ and sells them for 35 ¢. He cannot return unsold papers. If the daily demand for papers is modeled as a  $\text{Binom}(50, 0.5)$  random variable, what is the optimum number of papers the newsboy should purchase?

SOLUTION. ■

PROBLEM 6.3 (HANDOUT 8, # 12)

SOLUTION.



PROBLEM 6.4 (HANDOUT 8, # 13)

SOLUTION.



PROBLEM 6.5 (HANDOUT 8, # 14)

SOLUTION.



PROBLEM 6.6 (HANDOUT 8, # 15)

SOLUTION.

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PROBLEM 6.7 (HANDOUT 8, # 16)

SOLUTION.



PROBLEM 6.8 (HANDOUT 9, # 3)

SOLUTION.



PROBLEM 6.9 (HANDOUT 9, # 14)

SOLUTION.

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