

Laboratory Activity 5 for Math 080: Topics from Chapter 4

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1 Introduction

Please watch the video entitled “Binomial Distributions” on Moodle.

2 Questions

1. Using LibreOffice Calc, or Excel, follow along with the example derivation of the two claims about the binomial distribution.
2. Increase the number of runs to 20. What is the effect on μ and σ ?
3. Create a histogram of $p(x)$ (normalized) versus x for the 20 runs. What does the PDF resemble? Does this shape look familiar?
4. Try plotting the wage data from Tab. 1 of Unit 1.1 lecture notes (see Moodle page) on the same style graph as the binomial distribution with $n = 10$, and $p = q = 0.5$. How do they look similar or different?