

# Unit 5 – Sampling Distributions

7 – 12% Exam Weight

Day	Lesson and Objectives	Assignment
12/5	<p><b>Notes 1 – The Normal Distribution and Combining Normal Random Variables</b></p> <ul style="list-style-type: none"> <li>• VAR-6.A: Calculate the probability that a particular value lies in a given interval of a normal distribution.</li> <li>• VAR-6.B Determine the interval associated with a given area in a normal distribution.</li> <li>• VAR-6.C Determine the appropriateness of using the normal distribution to approximate probabilities for unknown distributions</li> <li>• VAR-5.E Calculate parameters for linear combinations of random variables.</li> </ul>	HW 1
12/6	<p><b>Activity: Simulation of the Sampling Distribution of a Sample Proportion</b></p> <ul style="list-style-type: none"> <li>• An introduction activity to the differences between population, sample, and sampling distributions by using a simulation</li> <li>• UNC-3.H Estimate sampling distributions using simulation.</li> </ul>	
12/9	<p><b>Optional Unit 4 Project Due Today by 3:15 pm</b></p> <p><b>Notes 2 – Sampling Distribution of a Sample Proportion</b></p> <ul style="list-style-type: none"> <li>• UNC-3.I Explain why an estimator is or is not unbiased.</li> <li>• UNC-3.J Calculate estimates for a population parameter.</li> <li>• UNC-3.K Determine parameters of a sampling distribution for sample proportions.</li> <li>• UNC-3.L Determine whether a sampling distribution for a sample proportion can be described as approximately normal.</li> <li>• UNC-3.M Interpret probabilities and parameters for a sampling distribution for a sample proportion.</li> </ul>	HW 2
12/10	<p><b>Notes 3 – Sampling Distribution of a Difference in Sample Proportions</b></p> <ul style="list-style-type: none"> <li>• UNC-3.N Determine parameters of a sampling distribution for a difference in sample proportions.</li> <li>• UNC-3.O Determine whether a sampling distribution for a difference of sample proportions can be described as approximately normal.</li> <li>• UNC-3.P Interpret probabilities and parameters for a sampling distribution for a difference in proportions.</li> </ul>	HW 3
12/11	<p><b>Activity: Population, Sample, and Sampling with Yellow M&amp;Ms</b></p> <ul style="list-style-type: none"> <li>• Students develop an understanding of the differences between the three topics by sampling yellow M&amp;Ms from a population.</li> </ul>	
12/12	<b>Unit 5 Quiz</b>	

12/13	<p><b>Notes 4 – Sampling Distribution of a Sample Mean</b></p> <ul style="list-style-type: none"> <li>• UNC-3.H Estimate sampling distributions using simulation.</li> <li>• UNC-3.Q Determine parameters for a sampling distribution for sample means</li> <li>• UNC-3.R Determine whether a sampling distribution of a sample mean can be described as approximately normal.</li> <li>• UNC-3.S Interpret probabilities and parameters for a sampling distribution for a sample mean.</li> </ul>	HW 4
12/16	<p><b>Notes 5 – Sampling Distribution of a Difference in Sample Means</b></p> <ul style="list-style-type: none"> <li>• UNC-3.T Determine parameters of a sampling distribution for a difference in sample means</li> <li>• UNC-3.U Determine whether a sampling distribution of a difference in sample means can be described as approximately normal.</li> <li>• UNC-3.V Interpret probabilities and parameters for a sampling distribution for a difference in sample means</li> </ul>	HW 5
12/17	<p><b>Activity: Unit 5 Circuit Review</b></p> <ul style="list-style-type: none"> <li>• Students review all the material in Unit 5 by practicing AP-style problems in a circuit-style review.</li> </ul>	
12/18	<p><b>Unit 5 Summary</b></p> <ul style="list-style-type: none"> <li>• Unit 5 Summary Slides with Student Handout</li> <li>• Work on Test Review for the rest of class</li> </ul>	Test Review due the day of the test
12/19	<b>Unit 5 Test</b>	All Unit 5 Assignments Due Today