New syllabus and Text for Math 110


Purchase Link from Publisher: https://he.kendallhunt.com/product/introduction-mathematical-literacy

The syllabus and text for Math 110 have been changed – essentially, the 2 chapters on weighted voting systems and exponential growth have been deleted and replaced by a Chapter on voting methods and a Chapter on apportionment. This makes our course more in line with other math literacy courses throughout Cuny and throughout the country. The 4 chapters on Probability and Statistics cover the same basic material as our previous text did – the difference being that it all comes from the same text and the new text has some interesting examples showing how to perform statistical routines through Excel (optional).

For the Chapter on Voting Methods please cover the 5 different voting methods (plurality, plurality with runoffs, Borda’s method, head to head comparisons, and approval voting). You should try and do in class at least one example where each of these methods produces a different winner. Additionally, you should show that each of the above methods is unfair according to Arrow’s criteria, and then talk about Arrow’s Impossibility Theorem.

For the Chapter on Apportionment, please cover Hamilton’s Method, Lowndes’ Method, Jefferson’s Method, Webster’s Method and the Hill-Huntington Method. Additionally, please cover the material on quota violations and individual paradoxes, such as the Alabama Paradox. Finally, please cover the material in Section 2.4 – the Balinski and Young theorem together with illustrations of how the above mentioned apportionment methods either are susceptible to paradoxes or otherwise are susceptible to quota violations.