The challenges facing delivery of a College Algebra class to nontraditional undergraduate students in nontraditional higher education programs are especially pronounced when the environment for learning is online. Outside of entering the program with varying degrees of mathematical competencies, students are more than likely to encounter different styles and techniques of learning mathematical concepts than previously encountered in prior mathematical educational endeavors. However, along with this alternative structure, scores of web-based algebraic resources exist and are readily available to support learning and understanding of course related instructional materials. Web-based algebraic resources range from the elementary and basic techniques to extremely complex theoretical algebraic structures. However, the key for the online instructor/facilitator is to not only balance the appropriate number and complexity of resources but also to insure that students effectively use them for understanding the algebraic concepts presented to them. This research considers how online algebraic resources are introduced in the online learning environment and which method is the most effective strategy to support teaching and learning of College Algebra. (Received September 22, 2010)