Recommended Open Educational Resources for an Undergraduate Course in College Algebra II with Trigonometry

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Two open educational resources are recommended for an undergraduate course in College Algebra II with Trigonometry:

1. **PreCalculus by Jay Abramson**

   URL: https://openstax.org/details/books/precalculus

   PreCalculus by Jay Abramson is designed to meet the needs of undergraduate students who are taking College Algebra II with Trigonometry or PreCalculus courses. The textbook contains a good selection of topics pertinent for a PreCalculus course which is a precursor to the Calculus sequence. The content is well-organized and presented in a clear, logical fashion. At the beginning of every section are clearly defined learning objectives for the section in the respective chapter. In addition, at the end of every chapter is a summary and a list of important takeaways from the chapter. Definitions are clear, concepts are well-explained, graphs and diagrams are appropriate and beautifully illustrated. There is an adequate number of worked examples and problems of varying degrees of complexity, and answers to selected exercises are provided. There are also excellent real-world application problems that students can relate to. This textbook is also accompanied by additional resources for students and instructors – for example, an Instructor's Solutions manual and PowerPoint slides can be made available to faculty upon request, and there is also a free Student Solutions manual. This textbook is highly recommended. It is written in a style that is friendly, interactive, and the mathematics is written in an inviting way. A student who uses this textbook will be adequately prepared for the Calculus sequence.

2. **Trigonometry by Mike Weimerskirch, Ph.D.**

   URL: https://open.lib.umn.edu/trigonometry/

   This textbook can be described as a movie. It consists of short, prerecorded YouTube lecture videos, with corresponding transcripts and slideshows. Complementing this textbook is a series of in-class activities which provide an opportunity to develop problem solving and abstraction skills. The textbook is suitable for students taking PreCalculus courses or College Algebra II with Trigonometry. It incorporates multimedia elements effectively – the video captures the instructor speaking, but also includes supportive images like graphs, diagrams, and PowerPoint slides which help augment learning and add variety, thus catering to all students' needs. The

videos are captioned and are accessible to students with disabilities. The instructor uses a conversational style to teach, speaks quickly, and with enthusiasm, thus engaging students. The videos are brief as concepts taught are broken down into smaller chunks and targets specific learning goals. The book has a wide coverage of topics, yet it is written in such a way that instructors can easily select the topics relevant to their course outlines. The content is accurate and well-explained. The textbook stimulates a student's interests and the information presented is thorough yet is simple and easy to follow. This "video" book is appropriate and highly recommended and adequately prepares an undergraduate student for Calculus.