**Beginning Algebra Made Useful**

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**Description**

*Beginning Algebra Made Useful* addresses the needs of learners to make sense of algebra by quantifying and generalizing everyday occurrences such as commuting to work, buying gas or pizza, and determining the better deal. It requires learners to actively engage with algebraic concepts through physical and thought experiments in ways that help them connect ideas, representations, and contexts, and solve problems that arise in their daily lives. The texthelps learners grow their brains and develop growth mindsets as they learn algebra conceptually. Problem sets continue the process, extending work begun in each lesson, applying new understandings to new contexts, and considering ideas that arise more fully in upcoming lessons. Longer assignments that can be used as group projects are included in the text. Group work is encouraged throughout the text; suggestions for orchestrating group work are included.

This text is different from most existing beginning algebra texts in several ways: The text is free for download by students and instructors in .pdf format; in the electronic format, graphics are in full color and there are live html links to resources, software, and applets; the text is open source, and interested instructors can gain access to the original source files upon request.

**ISBN**

**Publication Date**

5-2020

**Publisher**

Grand Valley State University Libraries

**City**

Allendale, MI

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**Disciplines**

Mathematics

**Key Words**

Beginning Algebra, Mathematics, Conceptual Understanding, Real Life, Contextual, Experiential, Growth Mindset, Growing your Brain, Group Work, Remedial Mathematics, Middle School, High School, College University