

BASIC PROPERTIES OF REAL NUMBERS: OBJECTIVES*

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Abstract

This module is from Elementary Algebra by Denny Burzynski and Wade Ellis, Jr. The symbols, notations, and properties of numbers that form the basis of algebra, as well as exponents and the rules of exponents, are introduced in this chapter. Each property of real numbers and the rules of exponents are expressed both symbolically and literally. Literal explanations are included because symbolic explanations alone may be difficult for a student to interpret. This module contains the objectives of the chapter "Basic Properties of Real Numbers".

After completing this chapter, you should

Symbols and Notations ([here](#)¹)

- understand the difference between variables and constants
- be familiar with the symbols of operation, equality, and inequality
- be familiar with grouping symbols
- be able to correctly use the order of operations

The Real Number Line and the Real Numbers ([here](#)²)

- be familiar with the real number line and the real numbers
- understand the ordering of the real numbers

Properties of the Real Numbers ([here](#)³)

- understand the closure, commutative, associative, and distributive properties
- understand the identity and inverse properties

Exponents ([here](#)⁴)

- understand exponential notation

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¹"Basic Properties of Real Numbers: Symbols and Notations" <<http://cnx.org/content/m18872/latest/>>

²"Basic Properties of Real Numbers: The Real Number Line and the Real Numbers"

<<http://cnx.org/content/m21895/latest/>>

³"Basic Properties of Real Numbers: Properties of the Real Numbers" <<http://cnx.org/content/m21894/latest/>>

⁴"Basic Properties of Real Numbers: Exponents" <<http://cnx.org/content/m21883/latest/>>

- be able to read exponential notation
- understand how to use exponential notation with the order of operations

Rules of Exponents (here⁵)

- understand the product and quotient rules for exponents
- understand the meaning of zero as an exponent

The Power Rules for Exponents (here⁶)

- understand the power rules for powers, products, and quotients

⁵"Basic Properties of Real Numbers: Rules of Exponents" <<http://cnx.org/content/m21900/latest/>>

⁶"Basic Properties of Real Numbers: The Power Rules for Exponents" <<http://cnx.org/content/m21897/latest/>>