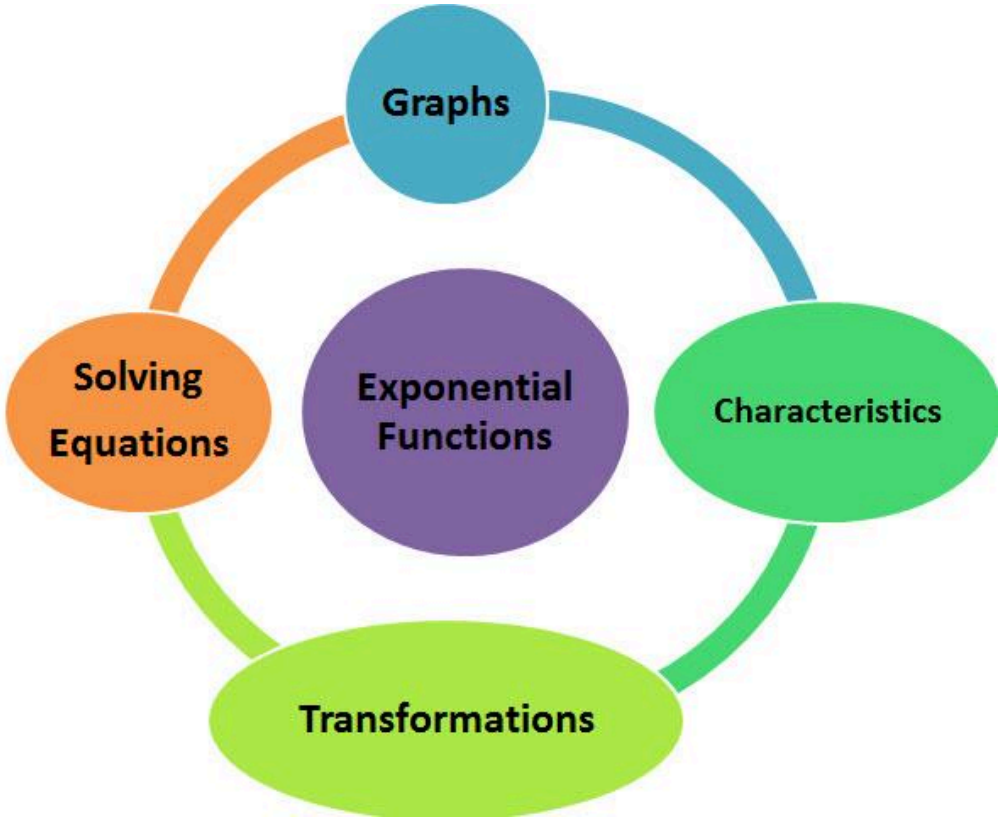
7. Exponential Functions



Chapter 7 Exponential Functions Outline

7.1	Characteristics of Exponential Functions
7.2	Transformations of Exponential Functions
7.3A	Solving Exponential Equations Algebraically
7.3B	Solving Exponential Equations Applications
	Performance Task on Exponential Functions and Review
	7. Exponential Functions Exam

Exponential Functions Performance Task contributed by Debbie Terceros and Josie Nagtegaal.
Answer Key

Performance Task: Exponential Functions

Chapter 7

Exponential equations are often used in financial planning. Car loans, mortgages, students and investments can be calculated using a compound interest formula.

The Brandt's are a young couple just getting started in planning their financial future. They have decided to take two steps towards their goal.

Notes for Exponents AND Logs

Combined Notes for Exponents and Logarithms

7.1 Characteristics of Exponential Functions

Class Notes

The McGraw-Hill Ryerson PreCalculus 12 Text is used as the Main Resource.
Assignments in the Powerpoint Lesson Plans refer to pages and questions in the PreCalculus 12 text.

7.1 Characteristics of Exponential Functions

7.2 Transformations of Exponential Functions

Class Notes

The McGraw-Hill Ryerson PreCalculus 12 Text is used as the Main Resource.
Assignments in the Powerpoint Lesson Plans refer to pages and questions in the PreCalculus 12 text.

7.2 Transformations of Exponential Functions

Digital Resources to Enhance Learning and Differentiate Instruction

7.2 Exponential Functions (Nspire File)

7.3 Solving Exponential Equations

Class Notes

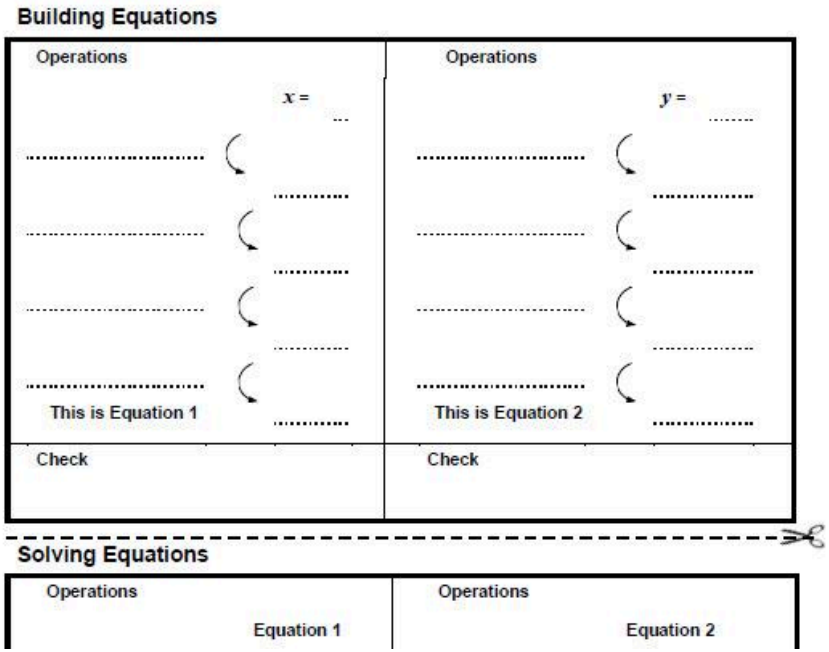
The McGraw-Hill Ryerson PreCalculus 12 Text is used as the Main Resource.
Assignments in the Powerpoint Lesson Plans refer to pages and questions in the PreCalculus 12 text.

7.3A Solving Exponential Equations
7.3B Applications of Solving Exponential Equations

Pedagogical Shifts: TRANSFORM, Moving from Traditional to Student-centered

Shifting from content based to competencies based
Shifting from Student as Knowledge Recipient to Student as Inquirer and Creator
Shifting from Memorization to Higher-level Thinking
Shifting from One-size-fits-all to Personalized, Differentiated

[Building and Solving Equations Activity Template]



I used, this template as an introduction to Solving Exponential Equations. Students had to build exponential equations starting from x = #. For example, x = 3, In the next step, multiple by 2 to get 2x = 6. Add 3 to both sides, 2x+3 = 9. Finally raise each side of the equation to a base: 5^(2x+3) = 5^9. I had students switch papers and them solve the equation by undoing the steps in the reverse order. I liked how students were able to justify the strategy of equating the exponents when the bases are the same.

7. Exponential Review

[Chapter 7 Review (Dave Kruisselbrink)]