U6D4 – Exponential Equations Part 1

Definition of an Exponential Equation: _____

_____

Example : _____

Methods to Solve

1. Common Base: _____

_____

2. Systematic Trial: _____

_____

3. Graphing: _____

_____

4. Logarithms: _____

_____

U6D4(Continued) ***Method #1 : Common Base***

Looking for a common base:

Express each number as a power

a. 8 as a power of 2.

b. 81 as a power of 9

c. 81 as a power of 3

d. 0.25 as a power of 2

Using a common base to solve exponential equations

- **Step 1 – find common base on both sides of equation.**
- **Step 2 – set exponents equal to each other and solve.**

Solve the following exponential equations

a. $3^x = 3^7$

b. $2^x = 32$

c. $7^{3x-4} = 49$

d. $9^{2x-1} = 27^{3x}$

HW Pages 365-367 #1-7, 10