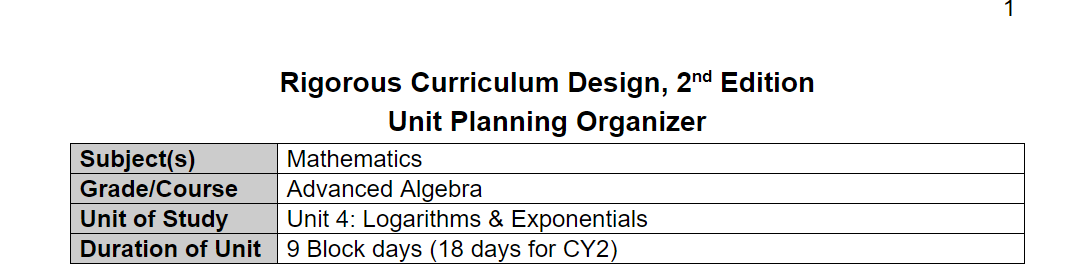
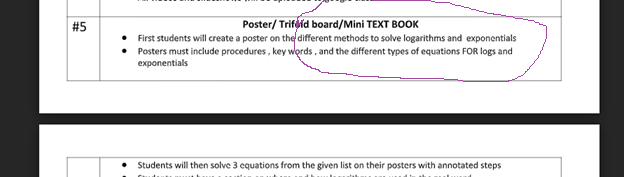
Different methods to solve exponential equation

PPS – GVC – Math – Advance Algebra





Solving the exponential equation

**Method 1**: Common base

Divide by 2

Convert 7 to the same base 3 7

Rewrite the equation with same base

Apply exponential property: product

***Cancel the base***

Distribute and separate variable

Factor and solve for x

**Method 2**: Using logs

Divide by 2

***Take log both sides, use common log***

Apply logarithm property

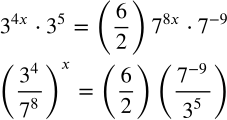
Distribute and separate variable

Factor and solve for x

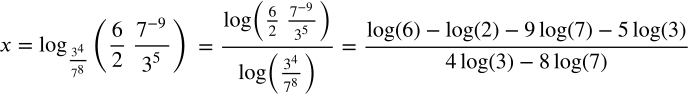
**Method 3**: Use Exponential Properties

2 times 3 raised to the 4 x plus 5 power equals 6 times 7 raised to the 8 x minus 9 power⁣

Divide by 2. Apply exponential property. Apply cross multiply property to separate variable



Apply inverse property to solve for x



**Method 4**: Graphing method

Graph the exponential function of the left side, then the right side.

Locate the intersection of these two

