**6.6 – Exponential and Logarithmic Equations**

**Using Like Bases to Solve Exponential Equations**

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**Examples**

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**Solving Exponential Equations Using Logarithms**

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**Examples**

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**Equations Containing *e***

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**Examples**

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**Extraneous Solutions**

Sometimes the methods used to solve an equation introduce an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_solution, which is a solution that is correct algebraically but does not satisfy the conditions of the original equation. One such situation arises in solving when the logarithm is taken on both sides of the equation. In such cases, remember that the argument of the logarithm must be positive. If the number we are evaluating in a logarithm function is negative, there is no output.

**Examples**

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**Using the Definition of a Logarithm to Solve Logarithmic Equations**

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**Examples**

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**Using the One-To-One Property to Solve Logarithmic Equations**

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**Examples**

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**Using the Formula for Radioactive Decay**



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