

Diagnostic Questions

Logarithms

Algebra II

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1 Introduction

In mathematics, the logarithm function is the inverse to exponentiation. It serves an important part in precalculus, calculus, and more advanced math, as well as other fields such as computer science.

In order to learn all about logarithms, we must first ensure that we are familiar with its inverse function: exponentiation. With that being said, please try these practice problems:

2 Questions

1. Evaluate $\frac{4^{-3}}{4^{-1}}$
2. Simplify $\sqrt{112a^6}$
3. Evaluate $\sqrt[3]{64}$
4. Multiply and simplify $\sqrt{24b^3} \times \sqrt{40b^2} \times \sqrt{b^2}$
5. Evaluate $\sqrt{\frac{25}{196}}$
6. Evaluate $(9^6 \times 7^{-9})^{-4}$
7. Evaluate $\sqrt[3]{343}$
8. Simplify $\sqrt{42a^4b^6}$
9. Evaluate $(\frac{3^6}{y^{-5}})^2$

3 Answer Key

1. $\frac{1}{16}$

2. $4a^3\sqrt{7}$

3. 4

4. $8b^3\sqrt{15b}$

5. $\frac{5}{14}$

6. $\frac{7^{36}}{9^{24}}$

7. 7

8. $a^2b^3\sqrt{42}$

9. $3^{12} \times y^{10}$