

## Properties of Logarithms Exit Quiz

**Part A Instructions:** Choose the option that completes the sentence or answers the question.

1. Use the properties of logarithms to evaluate expression  $7^{\log_7 25}$ :
  - a. 7
  - b. 49
  - c. 5
  - d. 25
  
2. Write logarithmic expression as a single logarithm  $\log_2 15 - \log_2 3$ :
  - a.  $\log_5 2$
  - b.  $\log_2 5$
  - c.  $\log_2 3$
  - d.  $\log_3 15$
  
3. State the property used to rewrite the expression  $4 \log_4 2 = \log_4 16$ :
  - a. Quotient property
  - b. Product property
  - c. Power property
  - d. Inverse property
  
4. Evaluate logarithmic expression  $\log_6 9 + 2 \log_6 2$ :
  - a. 6
  - b. 3
  - c. 2
  - d. 18

**Part B Instructions:** Answer the question below.

Simplify logarithmic expression by applying the properties of logarithms:

$$(3^{\log_3 7})^2 - (\log_3 3^7)^2$$

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## Answers:

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4. Evaluate logarithmic expression  $\log_6 9 + 2 \log_6 2$ :

- a. 6
- b. 2
- c. 3
- d. 18

**Part B Instructions:** Answer the question below.

Simplify logarithmic expression by applying the properties of logarithms:

$$\begin{aligned} & (3^{\log_3 7})^2 - (\log_3 3^7)^2 \\ & = 7^2 - 7^2 \\ & = 0 \end{aligned}$$