



Antiremed Kelas 10 Matematika

Pangkat, Akar, dan Logaritma - Logaritma - Set 1 - Uraian

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halaman 1

<p>01. Hitunglah:</p> <p>a. ${}^2\log 4$</p> <p>b. ${}^2\log 8$</p> <p>c. ${}^2\log 16$</p> <p>d. ${}^3\log 27$</p> <p>e. $\log 1000$</p>	
<p>02. Carilah nilai x:</p> <p>a. ${}^2\log {}^2\log {}^2\log x = 0$</p> <p>b. ${}^2\log {}^3\log {}^2\log x = 1$</p> <p>c. ${}^3\log {}^2\log {}^2\log x = 1$</p>	
<p>03. Jika $\log 2 = x$, $\log 3 = y$, dan $\log 7 = Z$ maka:</p> <p>a. $\log 12 = \dots$</p> <p>b. $\log 42 = \dots$</p> <p>c. $\log 63 = \dots$</p> <p>d. $\log 98 = \dots$</p>	



<p>04. Jika ${}^2\log 3 = a$ dan $\log 5 = b$, maka nyatakan ekspresi-ekspresi berikut terhadap a atau b:</p> <p>a. ${}^4\log 9$</p> <p>b. ${}^8\log 27$</p> <p>c. ${}^{15}\log 100$</p> <p>d. ${}^2\log 15$</p>	
<p>05. Hitunglah!</p> <p>a. $5^5 \log 2$</p> <p>b. $\sqrt{2}^{2 \log 7}$</p> <p>c. $\sqrt{5}^{25 \log 8}$</p>	
<p>06. Jika $\log \frac{a^2}{b^4} = 2$, maka:</p> <p>a. $\log \frac{a}{b^2} = \dots$</p> <p>b. $\log \sqrt[4]{\frac{a^3}{b^6}} = \dots$</p> <p>c. ${}^4\log b - {}^2\log a = \dots$</p>	
<p>07. Jika ${}^a\log x = 2$, ${}^a\log y = 3$, dan ${}^a\log z = 5$, maka</p> <p>a. ${}^a\log \left(\frac{ax^3}{y^2z} \right)^2 = \dots$</p> <p>b. ${}^a\log \left(x\sqrt{y}\sqrt{z} \right) = \dots$</p>	



<p>08. Hitunglah:</p> $\frac{({}^3\log 45)^2 - ({}^3\log 5)^2}{{}^3\log \sqrt[3]{15}}$	
<p>09. Tunjukkanlah bahwa:</p> <p>a. $a^3 \log b^3 = a^7 \log b^7$</p> <p>b. ${}^{ab}\log c = \frac{1}{{}^c\log a + {}^c\log b}$</p>	
<p>10. Hitunglah nilai x, y, dan z jika diketahui:</p> $x \cdot y \cdot z = 512$ ${}^2\log x : {}^2\log y : {}^2\log z = 1 : 2 : 3$	