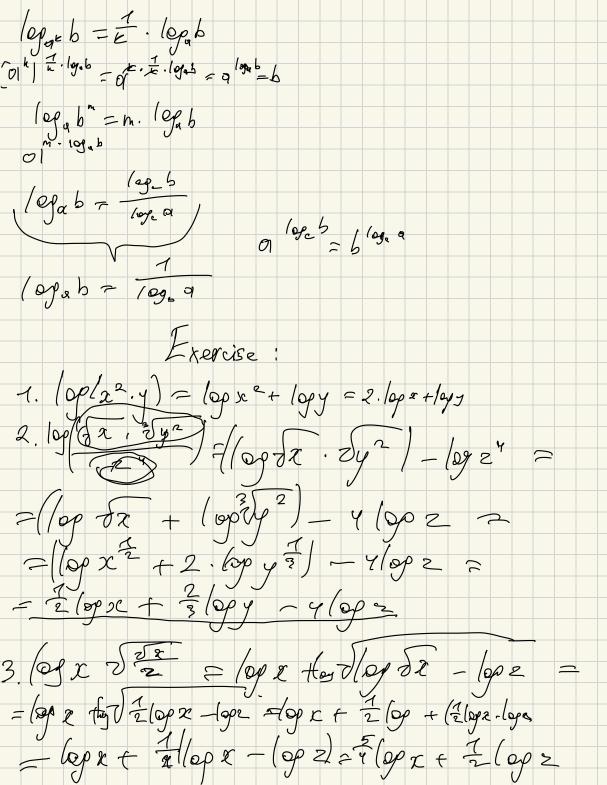


Algebra Part 3 Lecture Part 1/3 1. Logarithmie Formulas 01. Formulas and Exercise $log_b x = y$ $log_2 2 = 8$ loy3 e7= 3 $b^{y} = x$ laga 1 = 0 1. log_a1 = 0 ⇔ a>0, a≠1 2. log_aa = 1 ⇔ a>0, a≠1 3. $\log_a(b \cdot c) = \log_a b + \log_a c \Leftrightarrow a>0, b>0, c>0,a\neq1$ 2 = 1 $4.\log_a \frac{b}{c} = \log_a b - \log_a c \Leftrightarrow a>0, b>0, c>0,a\neq 1$ 5. log_abⁿ = n·log_a b ⇔ a>0, b>0, a≠1 $6.\log_a b = \frac{\log_a b}{\log_a a}$ Matematicus/ru $\log_{\alpha} \frac{1}{\alpha} = -1$ $\log_{\alpha} \alpha$ $7.\log_a b = \frac{1}{\log_a a} \Leftrightarrow a>0, b>0, a\neq 1, b\neq 1$ $8.\log_{a^n}b = \frac{1}{n}\log_a b \Leftrightarrow a>0, b>0, a\neq 1, n\neq 0$ 9. $\log_{a^{\frac{n}{m}}}b=\frac{m}{n}\cdot\log_{a}b \iff$ a>0, b>0, a≠1 10. $a^{\log_c b} = b^{\log_c a} \Leftrightarrow a>0$, b>0, c>0, a±1, b±1, c±1 11. a^{log_e b} = b ⇔ a>0, b>0, a≠1 Opak a = K lopar a = k > (ak) k in king (a ") = a lopa an=m lopa he = lopab+lopa e (32) = lop (8.4) = lop (4) + lop (4) 5 = 3 + 2 lopa c = lopab - lopac (of 2 33 = log 32 ~ log 28 = 5-3=2



$$ln(x) = log_{e}$$
; $e = 2.71728...$
 $log_{4}(-x) + log_{4}(6-x) = 2$
 $log_{4}(-1-2) + log_{4}(6-x) = 2$
 $log_{4}(-1-2) + log_{4}(6-(-2) = 2$
 $log_{4}(-1-2) + log_{4}(2)$
 $log_{4}(-1-2) + log_{4}(2)$
 $log_{4}(-1-2) + log_{4}(2)$

