

MTH 138 Practice Quiz #8

Name _____ Row _____

Show Essential work. Note that these sample questions are presented primarily for the purpose of helping you solidify the acquired concepts on related topics. The questions on the actual quiz may differ in type and format.

No Calculators Are Allowed for Questions (1)-(8)

(1) $\log_6 36 = ?$

(2) $\log_5 \left(\frac{1}{25} \right) = ?$

(3) $\log_3 1 = ?$

(4) $10^{\log_{10} 3} = ?$

(5) $\log 100000 = ?$

(6) $\log_2(\log_2 16) = ?$

(7) $\ln e = ?$

(8) If $\log_a 3 = 0.2$ and $\log_a 5 = 0.29$, then $\log_a 45 = ?$

Scientific Calculators May be Used for the Remaining Questions

(9) Solve for x : $\log_2 x + \log_2 (x + 1) = \log_2 12$

(10) Solve for x : $5^{2x-1} = 7^{1-3x}$ and express the answers in terms either common or natural logarithms.

(11) Solve for x : $\log_2(x^3) = (\log_2 x)^2$

Answers.

(1) 2

(2) -2

(3) 0

(4) 3

(5) 5

(6) 2

(7) 1

(8) 0.69

(9) 3

(10) $x = \frac{\ln 5 + \ln 7}{2\ln 5 + 3\ln 7}$ or $x = \frac{\log 5 + \log 7}{2\log 5 + 3\log 7}$

(11) $x = 1$ or $x = 8$