

Basic Log Work

① Change these power (exponent) statements into equivalent log statements

a) $10^3 = 1000$

b) $2^3 = 8$

c) $5^2 = 25$

d) $10^{-2} = 0.01$

e) $a^m = n$

f) $x^y = z$

② Change these log statements into equivalent power (exponent) statements

a) $\log_{10} 100 = 2$

b) $\log_{10} 0.1 = -1$

c) $\log_{10} 0.001 = -3$

d) $\log_2 32 = 5$

e) $\log_a x = y$

f) $\log_p q = z$

③ Evaluate these without a calculator

a) $\log_{10} 10000$

b) $\log_2 16$

c) $\log_3 3$

d) $\log_a 1$

e) $\log_4 16$

f) $\log_5 125$

④ Find x for these equations

a) $\log_x 125 = 3$

b) $\log_x 16 = 2$

c) $\log_{3x} 1000000 = 6$

d) $\log_x 81 = 4$