Name: *Caleb McWhorter — Solutions*
MATH 111-I
Spring 2025
Quiz 10

Problem 1: Write the following in the form $x^{a/b}$ for some a, b:

(a) $\dfrac{1}{\sqrt{x}} = x^{-1/2}$

(b) $\sqrt[3]{x^5} = x^{5/3}$

Problem 2: Compute the following:

(a) $\log_6(1) = 0$

(b) $\log_3\left(\dfrac{1}{27}\right) = -3$

(c) $\log_2(32) = 5$

(d) $\log_7(7) = 1$

(e) $\log_4\left(\dfrac{1}{4}\right) = -1$

(f) $\ln(e^4) = 4$

(g) $\log_\pi(\pi^6) = 6$

(h) $\log_{64}(8) = -\dfrac{1}{2}$