= bt) on the graph of f yields a point (u , t = logbu) on the graph of the logarithm and vice versa . As a consequence , logb (x) diverges to infinity (gets bigger than any given number) if x grows to infinity , provided that b is greater than one . In that case , logb (x) is an increasing function . For b < 1 , logb (x) tends to minus infinity instead . When x approaches zero , logb (x) goes to minus infinity for b > 1 (plus infinity for b < 1 , respectively) .

Derivative and antiderivative