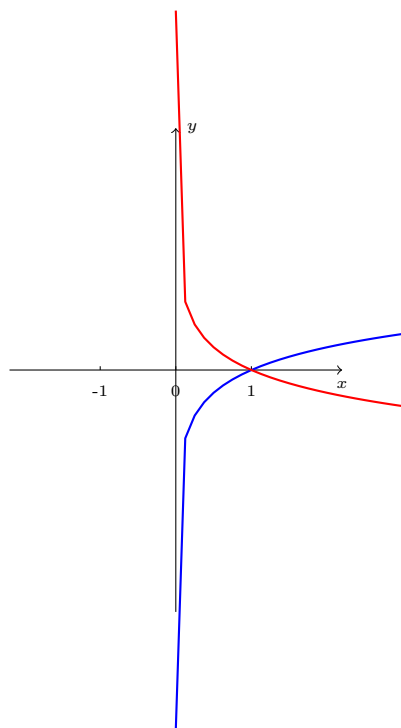# Problem 1

Logarithmic function : $f(x) = \log_b X$

BLUE LINE : $f(x) = \log_{10} X$ $REDLINE : f(x) = \log_{0.5} X$

DOMAIN: b:$(0,1) \cup (1, +\infty)$ $X : (0, +\infty)$

CO-DOMAIN: R

CHARACTERISTICS:

Fixed point: Function image is always over fixed point (1,0).

Monotonicity: when a>1, it is a monotonic increasing function in the domain of definition.

Parity: Non-odd and Non-even Functions

Periodicity: not a periodic function

Symmetry: None

Null point: X=1