

3. Consider the function $f(x) = \frac{x}{\sqrt{x^2+1}}$. Find the following:

Domain, intercepts, symmetry, asymptotes (horizontal and vertical), intervals of increase or decrease, local min/max, concavity and points of inflection. Use the data to sketch the curve.

4. Find the critical numbers of the function

a) $g(x) = x^{\frac{1}{3}} - x^{\frac{-2}{3}}$

b) $f(x) = 1 + (x - 3)^2$ on $(-2, 3]$

5. Find the relative and absolute minimum and maximum values for the function depicted below

