

Problem 1

Compute the following :

$$\frac{1}{3} + \frac{1}{4} = \quad 8^{5/3} = \quad \sin(\pi/3) = \quad \cos\left(\frac{2\pi}{3}\right) =$$

Problem 2

What is the domain of $f(x) = \frac{x}{\sqrt{x^2 - 1}}$?

Problem 3

Simplify $\frac{(1-x)^3 - 1}{x}$ so that there is no x in the denominator.

Problem 4

Solve the inequality $\frac{x^2 - 1}{x} \geq 0$.

Problem 5

Let $f(x) = x^2$. Give an equation of the line that intersects the graph of $f(x)$ at $x = 0$ and $x = \sqrt{2}$.