ASSIGNMENT 10

Practice

For each function we want to find

- limit as $x \to \pm\infty$
- roots
- critical points (and min/max) points

Using these we sketch a plot of the function.

- $f(x) = \dfrac{x+1}{x^2 - x + 2}$
- $f(x) = \sqrt{\dfrac{x}{x^2+9}}$
- $f(x) = \dfrac{x^2}{x^2+12}$
- $f(x) = \dfrac{1}{\sqrt{x^2+12}}$

Exercise 10.1. $f(x) = \dfrac{x^2+2}{x^2-2x+3}$

Exercise 10.2. $f(x) = \dfrac{x}{x^2-4x+5}$

Exercise 10.3. $f(x) = \dfrac{x^2-4}{x^2+9}$

Exercise 10.4. $f(x) = \dfrac{x}{x^2+9}$

Exercise 10.5. $f(x) = \dfrac{1}{x^2+16}$

Exercise 10.6. $f(x) = \dfrac{1}{\sqrt{x^4+16}}$

Exercise 10.7. $f(x) = \dfrac{x}{\sqrt{x^4+16}}$