

Example A.11. Determine for what values of z the function $f(z) = 1/z$ is analytic.

Solution. We can deduce the analyticity properties of f as follows. First, we observe that f is a rational function. Then, we recall that a rational function is analytic everywhere except at points where its denominator polynomial becomes zero. Since the denominator polynomial of f only becomes zero at 0, f is analytic everywhere except at 0.