

Math 295 - Fall 2020

Warm up 10.2

Due before class on Wednesday November 18

Please turn in this assignment on Gradescope.

Problem 1 : (Objective F3) Suppose that you want to compute the residue of h at $z = z_0$.

- a) If h has an essential singularity at z_0 , can you use Proposition 9.11 to compute the residue? Can you use Proposition 9.14?
- b) If h has a triple pole at z_0 , can you use Proposition 9.11 to compute the residue? Can you use Proposition 9.14?
- c) If h has a single pole at z_0 , can you use Proposition 9.11 to compute the residue? Can you use Proposition 9.14?
- d) If h has a removable singularity at z_0 , can you use Proposition 9.11 to compute the residue? Can you use Proposition 9.14?