

MATH 132
PRACTICE FINAL EXAM

Please note: This practice exam only covers the material not covered by the first midterm and first practice midterm. *The actual final exam is comprehensive and covers the material for the entire class.*

Problem 1. p. 228, No. 2

Problem 2. p. 205, No. 2

Problem 3. p. 205, No. 5.

Problem 4. Let $f(z) = \frac{e^{1/z}}{\sin z}$. (a) Find all singularities of f . (b) Which singularities are isolated? (c) Classify all singularities as removable, essential or poles and find the order of each pole.

Problem 5. Let $f(z) = \frac{\sin z}{\cos^2 z}$. What is the radius of convergence of the Taylor series expansion for $f(z)$ around 0? Write down the first 3 nonzero terms of the Taylor series.

Problem 6. p. 202: No. 3.

Problem 7. p. 202: No. 5.

Problem 8. Classify zeros and singularities of the function $f(z) = (z - \pi)^{-2} \sin z \operatorname{Log} z$. Which singularities are isolated?

Problem 9. p. 143: No. 3

Problem 10. p. 143: No. 6

Problem 11. p. 84: No. 1

Problem 12. p. 67: No. 1

Problem 13. p. 68: No. 3 and No. 4