7. Determine and classify the singularities of $f(z) = z^5 \exp(1/z^2)$.

8. Determine and classify the singularities of $f(z) = z^{-5} \exp(z^2)$.

9. Determine and classify the singularities of $f(z) = \dfrac{\sin(z)}{z + z^2}$.

10. Determine and classify the singularities of $f(z) = \cos\left(\pi \sin\left(1/z\right)\right)$.