Dr. Z.'s Intro to Complex Variable Attendance Quiz for Lecture 15

NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1. For each of the following functions, locate each of the isolated singularities of the given function and tell whether it is a removable singularity, a pole or essential singularity.

a) $\frac{e^{z^7}-1}{z^7}$.

b) $\sin(\frac{1}{z^3})$.

c) $\frac{z}{(z-2)^6\,(z-3)\,(z-5)^7}$.

2. For the following function, find its Laurent series about the indicated point. Also give the residue at the indicated point.

$$\frac{e^{2z}-1-2z-2z^2}{z^5} \quad , \quad z_0 = 0 \quad .$$