

Name:

1. Compute  $|e^{1+3i}|$ .

2. (a) Give the general solution to the following system of differential equations.

$$\mathbf{x}'(t) = \begin{pmatrix} 3 & 1 \\ 1 & 3 \end{pmatrix} \mathbf{x}(t)$$

(b) For the above system of differential equations, is the origin a source, sink, or saddle point?