

**HW#8** —Phys374—Spring 2006  
Due before class, Wednesday, April 12, 2006  
[www.physics.umd.edu/grt/taj/374a/](http://www.physics.umd.edu/grt/taj/374a/)

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1. Express the real and imaginary parts of the following functions in terms of  $x = \text{Re}(z)$  and  $y = \text{Im}(z)$ :  $z^3$ ,  $e^z$ ,  $e^{iz}$ ,  $\sin z$ ,  $1/(z^2 + 1)$ .
2. Problem 16.1h
3. Problem 16.2 a-h
4. Problem 16.3 a-j