

ADDITIONAL PROBLEMS FOR HW2

1. Express each of the following in the form $a+ib$, where a and b are real numbers

(a) e^{3+4i}

(b) $e^{i[\cos^{-1}(1)]}$

(c) $(e^i)^{1/2}$ (all values)

2. Express the following function in the form of $u(x,y)+iv(x,y)$, where u and v are real numbers

$$e^{1/\bar{z}}$$

3. Find $f'(1+i)$ (the derivative) if $f(z)$ is given by:

$$e^{(z+z^{-1})}$$