

**Homework Problem #005**

(a) Reduce  $\mathbf{z} = \frac{2 + j3}{4 + j5}$  to simple rectangular form.

(b) Convert  $\mathbf{z} = 6.4 - j5.6$  to polar form, with the angle in degrees.

(c) Given  $\mathbf{x} = 3.1e^{j1.8}$  and  $\mathbf{y} = -3.6 + j2.9$ , determine  $\mathbf{z} = \frac{\mathbf{x}}{\mathbf{y}}$  and express the result in exponential form with the angle in radians.