

Name _____

Homework 15
Appendix B

1. (4) Express the following in polar form $z = re^{i\theta}$

(a) $2 - 2\sqrt{3}i$

(b) $-i$

2. (4) Express $e^{2+\pi i}$ in Cartesian form.

3. (4) Calculate a and b so that $\frac{3-4i}{1+2i} = a + bi$.

Perform the following operations. Express your answers in Cartesian form.

4. (2) $(1 + 3i)(4 - 2i)$

5. (3) $(1 + i)^{20}$

6. (3) $\sqrt{-9i}$