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**United States Air Force Academy**
**Complex Analysis (Math 451), Writing Assignment #1**
**Submitted by I.M. Smart,   January 16, 2015**

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**Page 34, Problem 2**

Use exponential notation to show that

- $(1+i)^3 = -2 - 2i.$

- $2i(\sqrt{3}+i)(1+i\sqrt{3}) = -8$

**Solution**

By direct computation we observe that

$$
\begin{aligned}
(1+i)^3 &= xxx \\
&= yyy \\
&\ \vdots \quad \text{blah, blah, blah} \\
&= -2 - 2i.
\end{aligned}
$$

Proceeding to the second part, we compute

etc.