

Worksheet 30 - Lesson 79

Date _____ Period _____

1) Find and express in rectangular coordinates $\left(5\left(\cos \frac{\pi}{6} + \sin \frac{\pi}{6} \cdot i\right)\right)^3$

2) Find and express in rectangular coordinates $\left(-\frac{1}{3}\left(\cos \frac{7\pi}{15} + \sin \frac{7\pi}{15} \cdot i\right)\right)^5$

3) Use De Moivre's Theorem to evaluate and express in polar form $(1 - i)^{15}$

4) Use De Moivre's Theorem to evaluate and express in polar form $(1 - \sqrt{3} \cdot i)^5$

5) Use De Moivre's Theorem to evaluate and express in polar form $(-2 - 2i)^4$

6) Find all the third roots of $8i$ and express in polar form.

7) Find all the sixth roots of 27 and express in polar form.

8) Find all the fifth roots of $4 + 4i$ and express in polar form.