Review Problems for CHAPTER 8

1.   Write $\sqrt{-16}$ as a complex number.

2.   Simplify: (2-5i)+[(3-2i)-(4+3i)]

3.   Simplify i^{12}

4.   Multiply: $(3-2i)^2$

5.   Divide: $\dfrac{2}{2-i}$

6.   Write in standard form: 8(cos 30° + i sin 30°)

7.   Multiply and leave in trig. form
      3(cos 15° + i sin 15°)•5(cos 7° + i sin 7°)

8.   Divide and leave in trig form.
      $\dfrac{12(\cos 40° + i \sin 40°)}{3(\cos 12° + i \sin 12°)}$

9.   Multiply and leave in alg. form
      $[3(\cos 15° + i\sin 15°)]^4$

10.   Find two square roots of
      z=16(cos 150° + i sin 150°)

11.   Convert $(\sqrt{3},-1)$ to polar coordinates

12.   Convert (-5, 240°) to rectangular coordinates

13.   Write r = 4cosθ with rectangular coordinates

14.   Graph r = 3 + 3cosθ

CH.8 ANSWERS
1. 4i   2. 1-10i   3.   1   4. 5-12i   5. 4/5 + 2i/5   6. $4\sqrt{3}+4i$
7. 15(cos22 +isin22)   8. 4(cos28 + isin28)   9. 81(cos60+isin60)
10. 4(cos75+isin75) and 4(cos255 + isin255)   11. (2,330)
12. $\left(5/2, 5\sqrt{3}/2\right)$ 13. $x^2 + y^2 = 4x$ 14. graph