

Honors Precalculus – Sullivan & Sullivan
Chapter 9 (9-1 to 9-3) 2011-12

Section	Activities/Resources	Assignment
9.1	Completing the Square (Appendix, Section 10, pp. 998-999)	1-8, 9-25 eoo
9.1	Polar to Rectangular	29-43 odd, 65-71 odd
9.1	Rectangular to Polar Unit Circle Quiz	45-63 odd
9.2	Exploration of Cardioids & Limacons	17-30
9.2	Exploration of Roses & Circles	31-55 odd, omit 47, 49
9.2		1-16
	Rotations of polar graphs	More Polar Graphing worksheet
9.3	Unit Circle	1-28 by 3s
9.3		31-52 by 3s
Review		1, 7, 15, 19, 27, 33, 35, 41, 49, 52, 55
Review		5, 12, 16, 20, 21, 32, 37, 43, 47, 53, 56
9.4	QUEST 9.1 to 9.3	1-43 by 3s

9.1

2. B 4. C 6. D 8. D

9.2

2. $x^2 + y^2 = 4$ 4. $\theta = -\frac{\pi}{4}, y = -x$ 6. $x = 4$ 8. $y = -2$ 10. $r = 2 \sin \theta, x^2 + (y-1)^2 = 1$ 12. $(x+2)^2 + y^2 = 4$
 14. $x^2 + (y-4)^2 = 16$ 16. $r \sec \theta = 4, (x+2)^2 + y^2 = 4$ 18. A 20. B 22. G 24. C 26. B
 28. E 30. C

9.3

4. $z = 2(\cos 300^\circ + i \sin 300^\circ)$ 10. $z = \sqrt{7}(\cos 40.9^\circ + i \sin 40.9^\circ)$ 16. $-\sqrt{3} + i$ 22. $2.8533 + 0.9270i$
 $zw = 8(\cos \frac{15\pi}{16} + i \sin \frac{15\pi}{16})$ $z_0 = 2\sqrt[6]{2}(\cos 75^\circ + i \sin 75^\circ)$
 28. $\frac{z}{2} = 2(\cos \frac{29\pi}{16} + i \sin \frac{29\pi}{16})$ 34. $-2\sqrt{2} - 2\sqrt{2}i$ 40. -64 46. $z_1 = 2\sqrt[6]{2}(\cos 195^\circ + i \sin 195^\circ)$
 $z_2 = 2\sqrt[6]{2}(\cos 315^\circ + i \sin 315^\circ)$
 52. $z_0 = 1, z_1 = \frac{1}{2} + \frac{\sqrt{3}}{2}i, z_2 = -\frac{1}{2} + \frac{\sqrt{3}}{2}i, z_3 = -1, z_4 = -\frac{1}{2} - \frac{\sqrt{3}}{2}i, z_5 = \frac{1}{2} - \frac{\sqrt{3}}{2}i$

Review

52. 4096 12. (13, 1.96) or (-13, 5.10) 16. $r^2(2 - \cos^2 \theta) - \tan \theta = 0$
 20. $3x^2 + 3y^2 - y = 0$ 32. $z = 2(\cos 150^\circ + i \sin 150^\circ)$ 56. $z_0 = \sqrt{2} + \sqrt{2}i$ and so on...