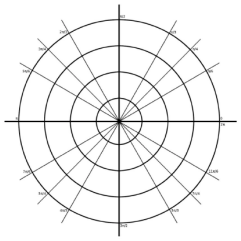
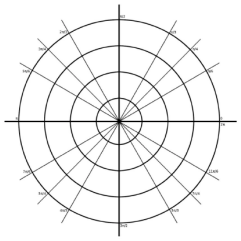
Polar Graphs

Directions: Identify each polar graph by name, and then sketch each graph by hand. Use a graphing calculator to check your work.

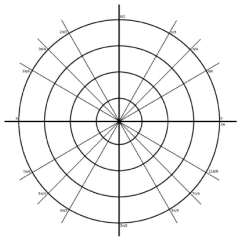
1. $r = 2 + 2\cos\theta$



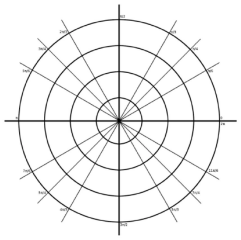
2. $r = 4\sin 2\theta$



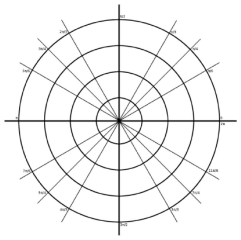
3. $r^2 = -9\cos 2\theta$



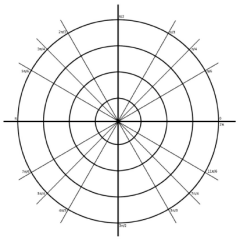
4. $\theta = \dfrac{2\pi}{3}$



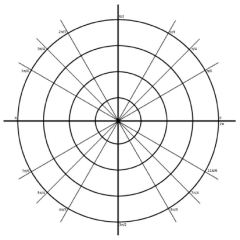
5. $r = 2\sin 3\theta$



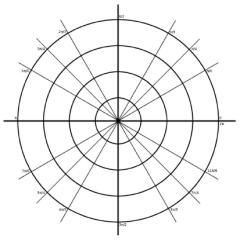
6. $r = 5 - 2\cos\theta$



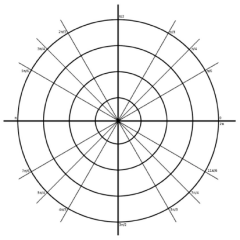
7. $r\cos\theta = 3$



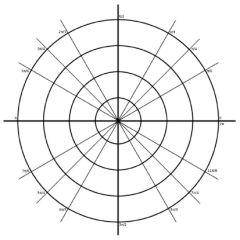
8. $r\sin\theta = -4$



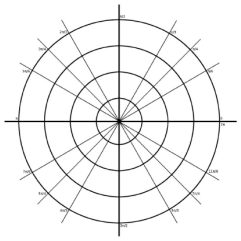
9. $r = 3$



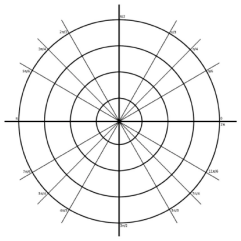
10. $r = 2 - 3\cos\theta$



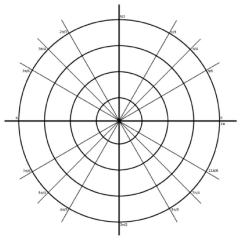
11. $r = 4\cos\theta$



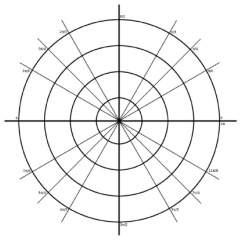
12. $r = -\cos 5\theta$



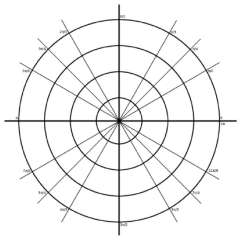
13. $r = -6\sin\theta$



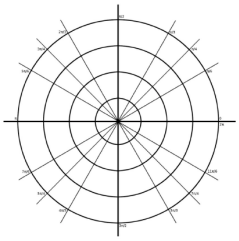
14. $r^2 = 4\sin 2\theta$



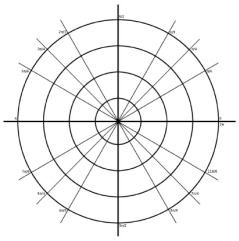
15. $\theta = -\dfrac{\pi}{6}$



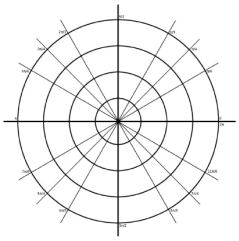
16. $r^2 = -4\sin 2\theta$



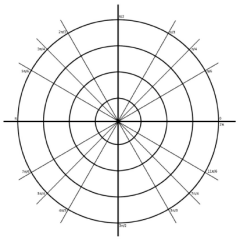
17. $r = 4 - 3\sin\theta$



18. $r = -2$



19. $r = 3\cos 4\theta$



20. $r^2 = 9\cos 2\theta$