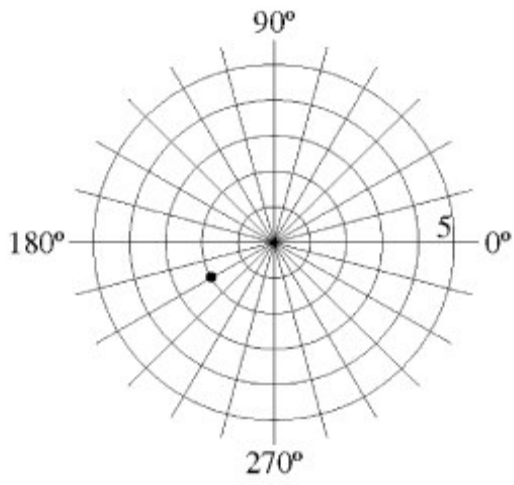


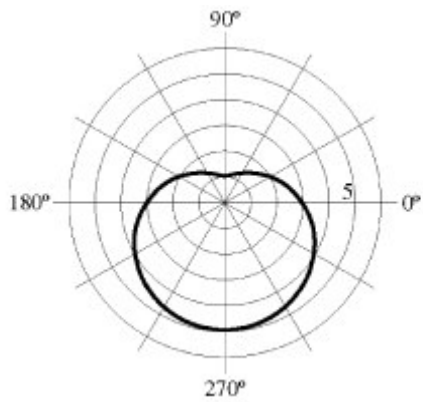
Pre-Calculus Spring Semester Final Exam Answer Key

1. B
2. C
3. B
4. A
5. B
6. A
7. D
8. D
9. D
10. A
11. D
12. C
13. B
14. C
15. D
16. A
17. D
18. C
19. C
20. C
21. B
22. C
23. B
24. C
25. B
26. C
27. D
28. A
29. B
30. A
31. A
32. C
33. D
34. C
35. B
36. C
37. C
38. D
39. A
40. D
41. D
42. C
43. B
44. A
45. D
46. B but really is $\left(12, \frac{\pi}{6}\right)$
47. C
48. D
49. B
50. D
51. C
52. C but really is $-7 - .24i$
53. B
54. -2, 18, 38, 58
55. A
56. C
57. A
58. B
59. C
60. B
61. B
62. $y = 2 \cos\left(\frac{1}{7}x\right)$
63.
 - a. 18.5°
 - b. 58.5°
 - c. 24 hours
 $y = 18.5 \sin\left(\frac{t}{12}\pi + \frac{\pi}{2}\right) + 58.5$
 - d. *or*
 $y = 18.5 \cos\left(\frac{t}{12}\pi\right) + 58.5$
 - e. $y(17) = \text{Approximately } 53.7^\circ \text{ within } 2^\circ$

64.



65.



66. 1

67. 1150

68. 8192

69. 364.33

70. $26 \frac{2}{3}$