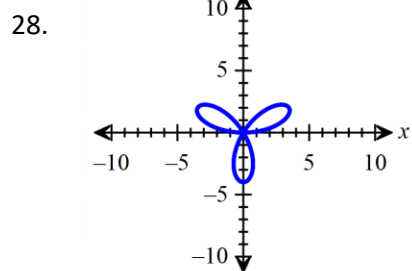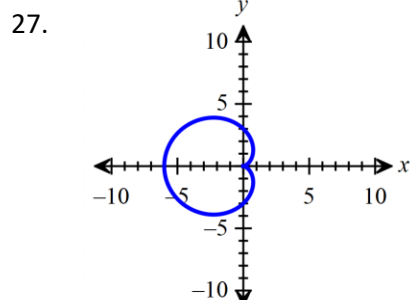Precalculus Unit 7 Review Answers

1. $\langle -22.39, -15.62 \rangle$

2. $r = 2\sqrt{13}, \quad \theta = -56.3° \text{ or } 303.7°$

3. $\langle -7, 22 \rangle$

4. -39

5. 138.2°

6. perpendicular

7. neither

8. parallel

9. 114.9 N, 49.2°

10. 17.1 lb

11. ground speed 414.4 mph true course 92.5°

12. $-6\sqrt{3} - 6i$

13. $\frac{7}{2}i$

14. $-2048 + 2048\sqrt{3}i$

15. $-128 + 128i$

16. $3(\cos 70° + i \sin 70°)$

 $3(\cos 160° + i \sin 160°)$

 $3(\cos 250° + i \sin 250°)$

 $3(\cos 340° + i \sin 340°)$

17. $2 + 2\sqrt{3}i, -4, 2 - 2\sqrt{3}i$

18. $-3 + 3i, 3 - 3i$

19. $(5\sqrt{2}, \frac{5\pi}{4})$

20. $(4, \pi)$

21. in Quadrant III

22. in Quadrant II

23. in Quadrant I

24. $(\sqrt{2}, -\sqrt{2})$

25. (0, -3)

26. $(2, 2\sqrt{3})$

27.

28.

29. $x^2 + y^2 = 5x$

30. $r = 5 \sec \theta$

31. $y = (x - 5)^2 + 3$

32. $\frac{x^2}{16} + y^2 = 1$

33. $x = 4t + 1, y = t - 2, -\le t \le 3$