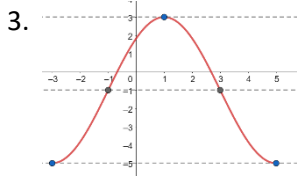


Term 3 Final Review Key

1. $5\sqrt{6}$

2. 1

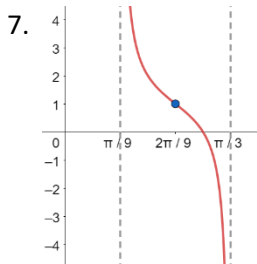


4. $y = -2 + \cot 6 \left(x + \frac{\pi}{12} \right)$

5. $y = \csc x$, $y = \cot x$

6. $\sin \theta = -\frac{12}{13}$, $\tan \theta = \frac{12}{5}$, $\csc \theta = -\frac{13}{12}$

$\sec \theta = -\frac{13}{5}$, $\cot \theta = \frac{5}{12}$



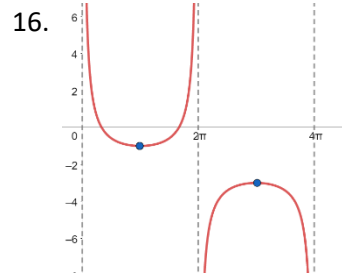
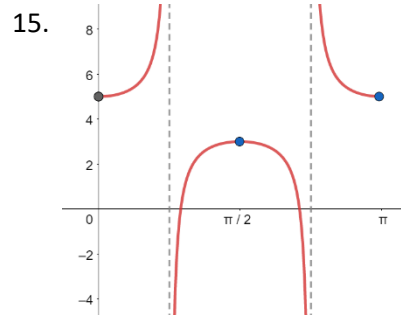
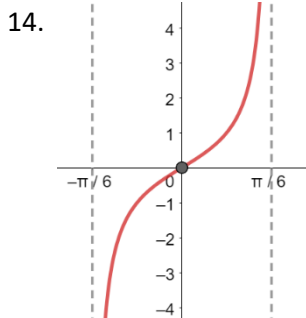
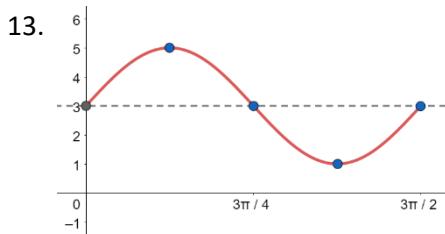
8. $x = 30^\circ$

9. angle rotates $3\frac{3}{4}$ times counterclockwise around the coordinate system / terminates on negative y-axis

10. negative

11a. T b. F c. T d. T e. T

12. Amp = $\frac{4}{5}$, period = $\frac{2\pi}{3}$



17. $\frac{11\pi}{6}$

18. -288°

19. $C = 53^\circ$, $a = 12.6$, $c = 16.8$

20. 42.9 feet

21. 177.96

22. $D = 74^\circ$, $d = 27.5$, $e = 27.2$

23. No triangle possible

24. $C = 35^\circ$, $B = 47^\circ$, $A = 98^\circ$

28. 2.683

29. 546.82

30. $3x + 1$

31. 21.97 years

32. **TYPO on worksheet.... Problem should have been $x^4 + 2x^3 + x^2 + 2x = 0$**

Solution: $x = 0, -2, \pm i$

33. a. (2, 13) b. (7, -2) c. (-2, 17)

34. x-int: $\left(-\frac{5}{3}, 0\right)$ y-int: $\left(0, \frac{5}{2}\right)$ hole: $\left(2, \frac{11}{4}\right)$

35. **TYPO on worksheet.... Problem should have been**

$$\frac{x^3 - x^2 - 6x}{x^2 - 9}$$

Solution: $\frac{x(x+2)}{(x+3)}$

36. $-\frac{1}{4}$