

6.7 (cont.)

Review: Find the values of θ for which each equation is true.

$\csc \theta = -1 \quad \theta = \frac{3\pi}{2} + 2\pi n, n \text{ is any integer}$

$\sec \theta = 1 \quad \theta = \pi n, n \text{ is an even integer}$

Period

$y = \sin k\theta \quad \rightsquigarrow \text{Period} = \frac{2\pi}{k}$

$y = \cos k\theta$

$y = \csc k\theta$

$y = \sec k\theta$

$y = \tan k\theta \quad \rightsquigarrow \text{Period} = \frac{\pi}{k}$

$y = \cot k\theta$

Phase shift & vertical shift work the same for all trig fns.

Reminder

$y = A \tan(k\theta + c) + h$

$\frac{P.S.}{-\frac{c}{k}} \quad \frac{V.S.}{h}$

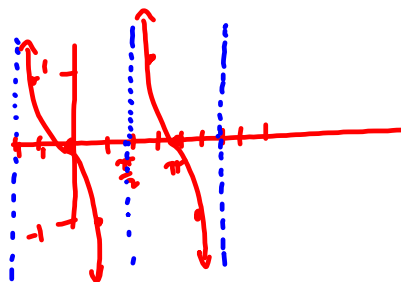
#29 $y = \cot(\theta - \frac{\pi}{2})$

$A = 1$

$P.S. = \frac{\pi}{2} \text{ or } -\frac{c}{k} = \frac{-\frac{\pi}{2}}{1}$

$V.S. = 0$

$\text{Period} = \pi \text{ or } \frac{\pi}{k} = \frac{\pi}{1}$



#37 $\cot \quad P = \frac{\pi}{2}$

$P.S. = \frac{\pi}{8}$

$V.S. = 7$

Period

$\frac{\pi}{2} \times \frac{\pi}{k}$

$\frac{k\pi}{\pi} = \frac{2\pi}{\pi}$

$k = 2$

P.S.

$\frac{\pi}{8} \neq -\frac{c}{2}$

$2\pi = \frac{-c \cdot 8}{-8}$

$c = -\frac{\pi}{4}$

$y = \cot(2\theta - \frac{\pi}{4}) + 7$