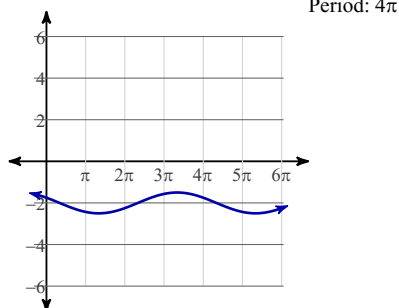
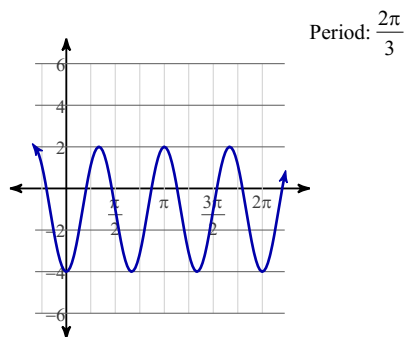


Answers to Worksheet 33 - Lesson 84

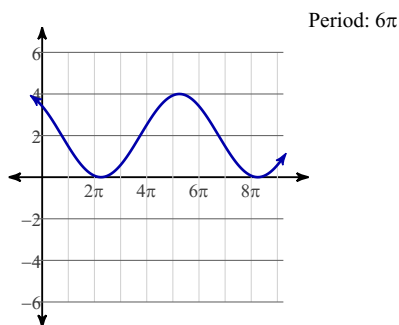
1)



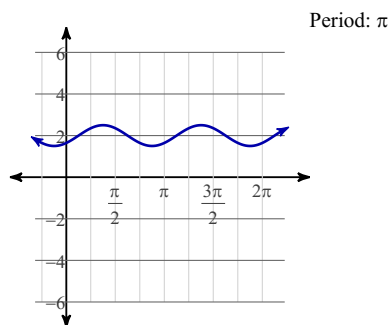
2)



3)



4)



$$\begin{aligned} 5) \text{ LHS} &= \frac{\cot^2 x}{\tan x} \\ &= \cot^2 x \cot x \\ &= \cot^3 x \\ &= \text{RHS} \end{aligned}$$

$$\begin{aligned} 6) \text{ LHS} &= \cos x \cdot (1 - \sin^2 x) \\ &= \cos x \cdot \cos^2 x \\ &= \cos^3 x \\ &= \text{RHS} \end{aligned}$$

$$\begin{aligned} 7) \text{ LHS} &= \frac{\tan^2 \theta}{\cot \theta} \\ &= \tan^2 \theta \tan \theta \\ &= \tan^3 \theta \\ &= \text{RHS} \end{aligned}$$

$$\begin{aligned} 8) \text{ LHS} &= \frac{(\csc^2 x - \cot^2 x)(\csc^2 x + \cot^2 x)}{\csc^2 x + \cot^2 x} + \cot^2 x \\ &= \csc^2 x - \cot^2 x + \cot^2 x \\ &= \csc^2 x \\ &= \text{RHS} \end{aligned}$$

$$\begin{aligned} 9) \text{ LHS} &= -\frac{\cos -\theta}{\sin -\theta} \cdot \tan\left(\frac{\pi}{2} - \theta\right) \\ &= -\cot -\theta \cdot \tan\left(\frac{\pi}{2} - \theta\right) \\ &= -\cot -\theta \cdot \cot \theta \\ &= \cot -\theta \cdot \cot -\theta \\ &= \cot^2 -\theta \\ &= \text{RHS} \end{aligned}$$