

Developing and Analyzing the Graphs of the Six Trigonometric Functions

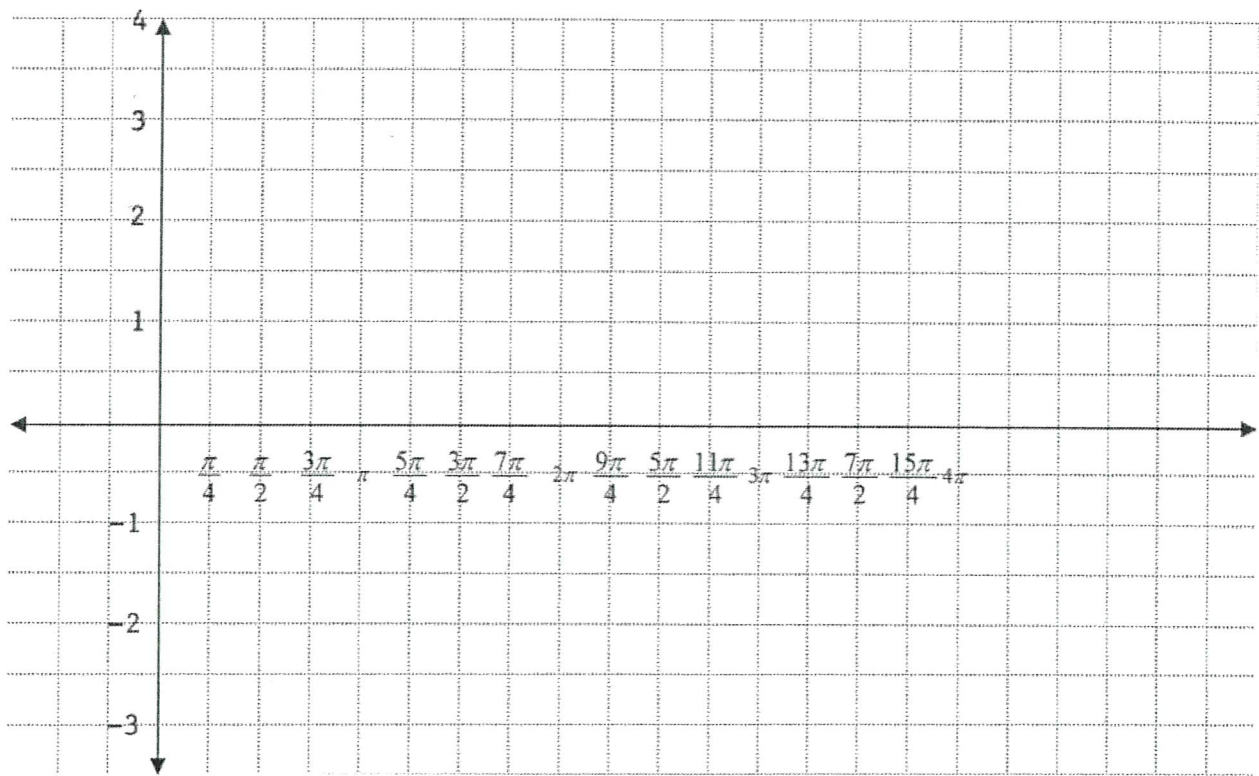
As you develop the graphs of the six trigonometric functions on pages 743 – 748, complete the chart below.

Basic Trig Function	Domain	Range	Period	Asymptotic Behavior
$F(\theta) = \sin \theta$				
$F(\theta) = \cos \theta$				
$F(\theta) = \tan \theta$				
$F(\theta) = \csc \theta$				
$F(\theta) = \sec \theta$				
$F(\theta) = \cot \theta$				

$$F(\theta) = \sin \theta$$

Complete the table of values for $F(\theta) = \sin \theta$ below. Then, graph as many cycles as you can on the grid that follows for the interval $0 \leq \theta \leq 4\pi$.

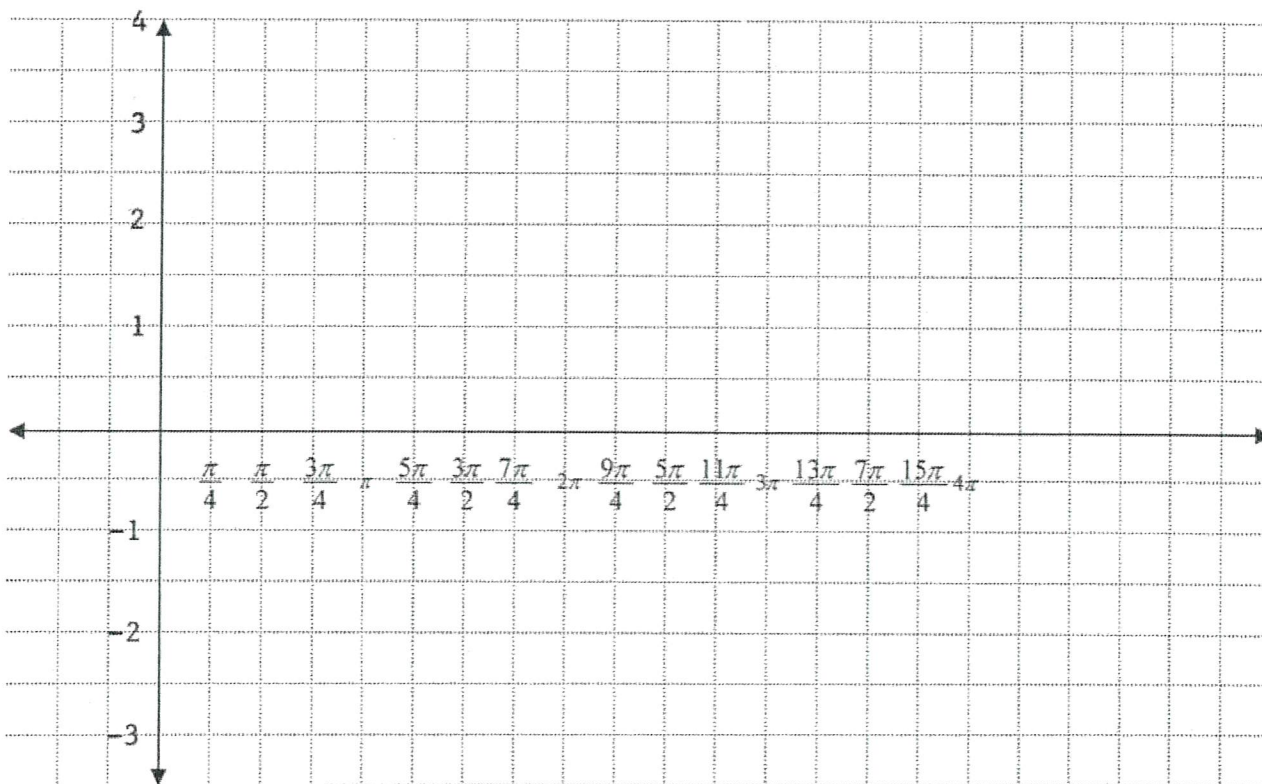
θ	$F(\theta)$
0	
$\frac{\pi}{4}$	
$\frac{\pi}{2}$	
$\frac{3\pi}{4}$	
π	
$\frac{5\pi}{4}$	
$\frac{3\pi}{2}$	
$\frac{7\pi}{4}$	
2π	



$$F(\theta) = \cos \theta$$

Complete the table of values for $F(\theta) = \cos \theta$ below. Then, graph as many cycles as you can on the grid that follows for the interval $0 \leq \theta \leq 4\pi$.

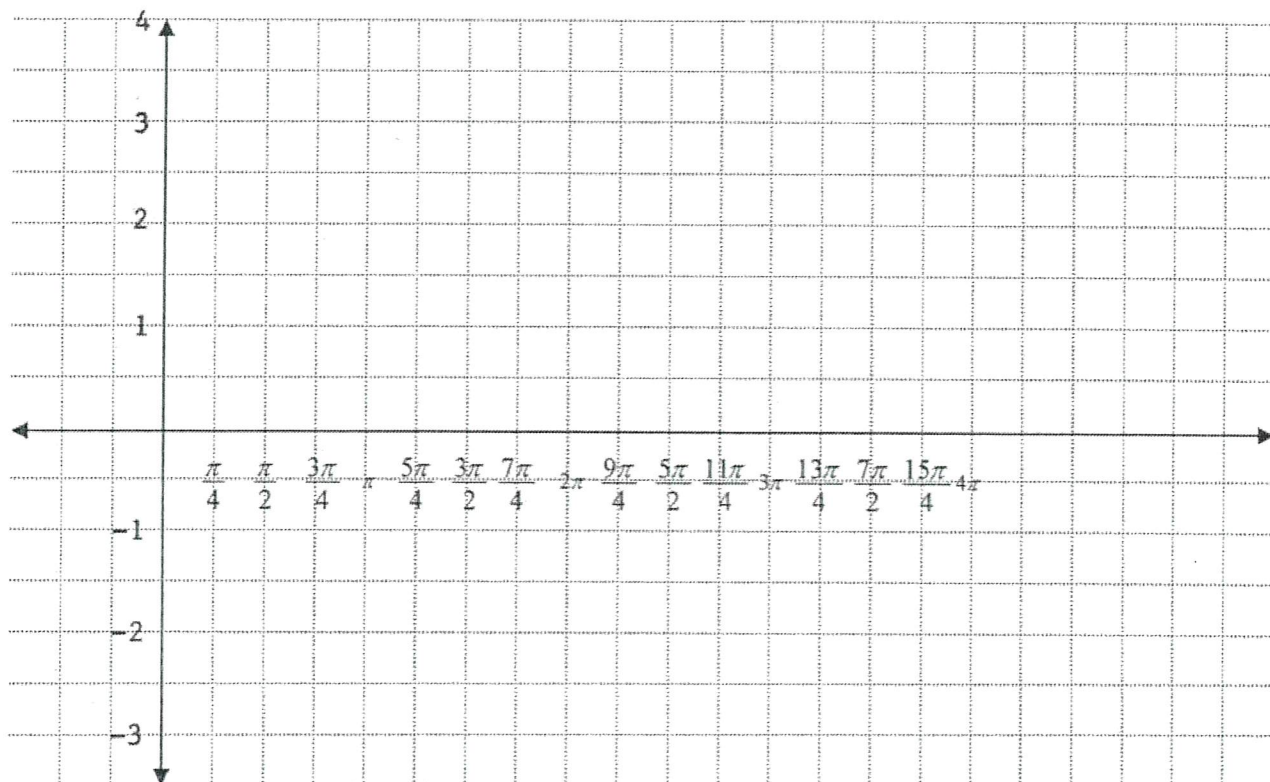
θ	$F(\theta)$
0	
$\frac{\pi}{4}$	
$\frac{\pi}{2}$	
$\frac{3\pi}{4}$	
π	
$\frac{5\pi}{4}$	
$\frac{3\pi}{2}$	
$\frac{7\pi}{4}$	
2π	



$$F(\theta) = \tan \theta$$

Complete the table of values for $F(\theta) = \tan \theta$ below. Then, graph as many cycles as you can on the grid that follows for the interval $0 \leq \theta \leq 4\pi$.

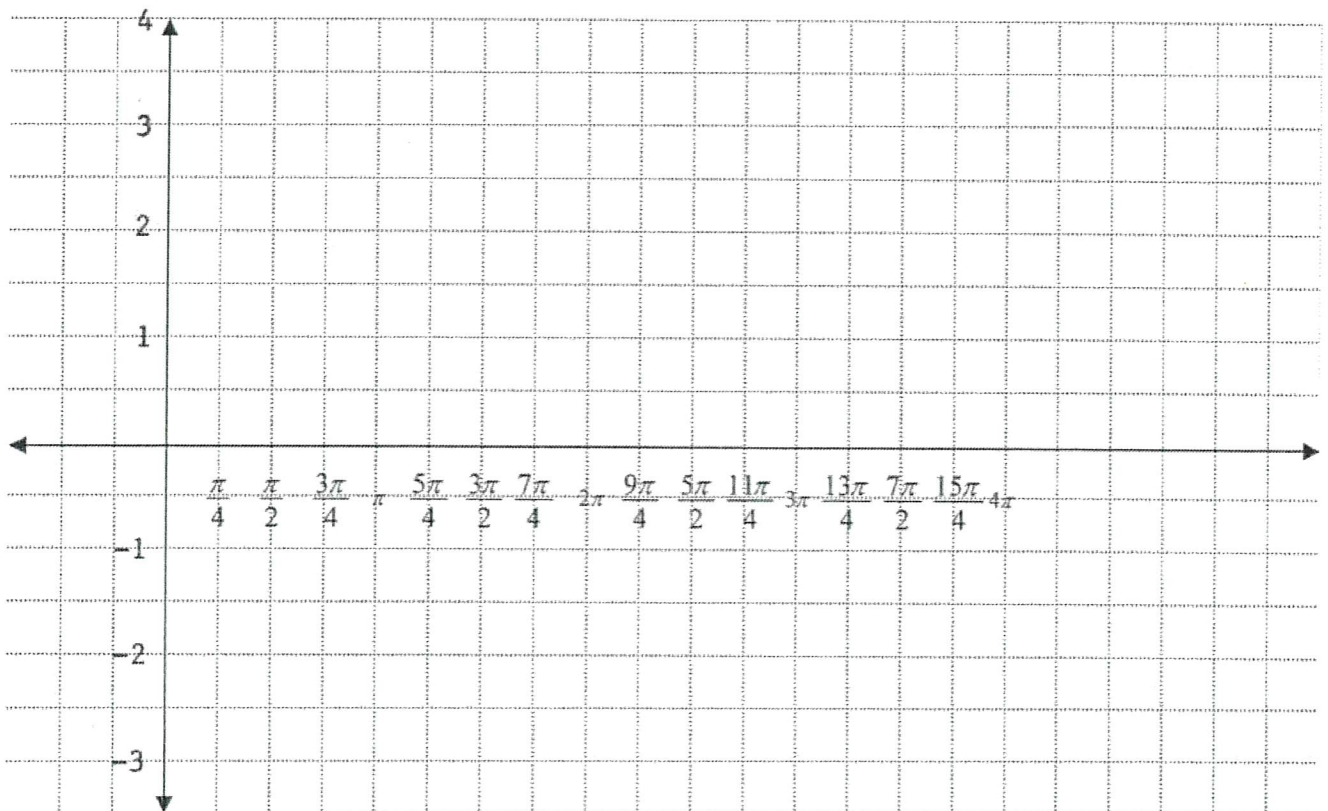
θ	$F(\theta)$
0	
$\frac{\pi}{4}$	
$\frac{\pi}{2}$	
$\frac{3\pi}{4}$	
π	
$\frac{5\pi}{4}$	
$\frac{3\pi}{2}$	
$\frac{7\pi}{4}$	
2π	



$$F(\theta) = \csc \theta$$

Complete the table of values for $F(\theta) = \csc \theta$ below. Then, graph as many cycles as you can on the grid that follows for the interval $0 \leq \theta \leq 4\pi$.

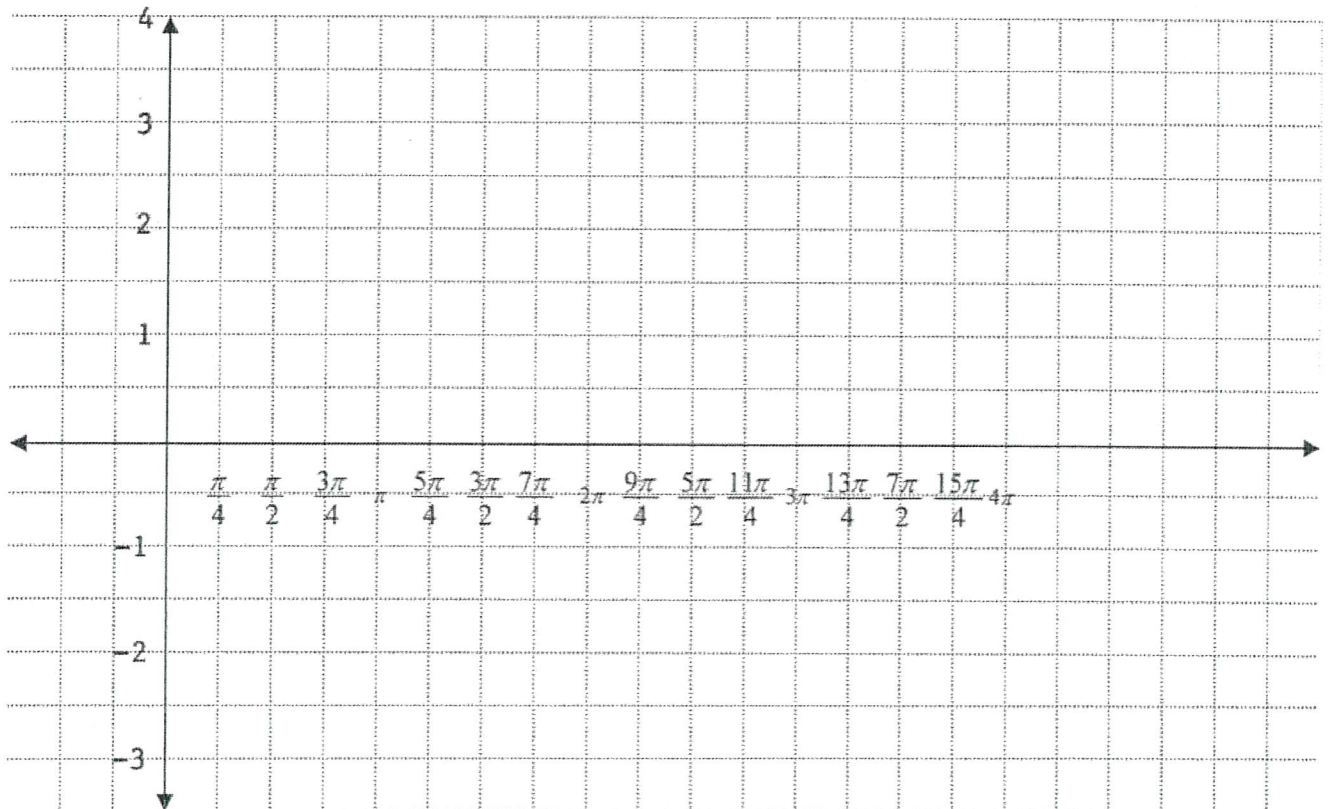
θ	$F(\theta)$
0	
$\frac{\pi}{4}$	
$\frac{\pi}{2}$	
$\frac{3\pi}{4}$	
π	
$\frac{5\pi}{4}$	
$\frac{3\pi}{2}$	
$\frac{7\pi}{4}$	
2π	



$$F(\theta) = \sec \theta$$

Complete the table of values for $F(\theta) = \sec \theta$ below. Then, graph as many cycles as you can on the grid that follows for the interval $0 \leq \theta \leq 4\pi$.

θ	$F(\theta)$
0	
$\frac{\pi}{4}$	
$\frac{\pi}{2}$	
$\frac{3\pi}{4}$	
π	
$\frac{5\pi}{4}$	
$\frac{3\pi}{2}$	
$\frac{7\pi}{4}$	
2π	



$$F(\theta) = \cot \theta$$

Complete the table of values for $F(\theta) = \cot \theta$ below. Then, graph as many cycles as you can on the grid that follows for the interval $0 \leq \theta \leq 4\pi$.

θ	$F(\theta)$
0	
$\frac{\pi}{4}$	
$\frac{\pi}{2}$	
$\frac{3\pi}{4}$	
π	
$\frac{5\pi}{4}$	
$\frac{3\pi}{2}$	
$\frac{7\pi}{4}$	
2π	

