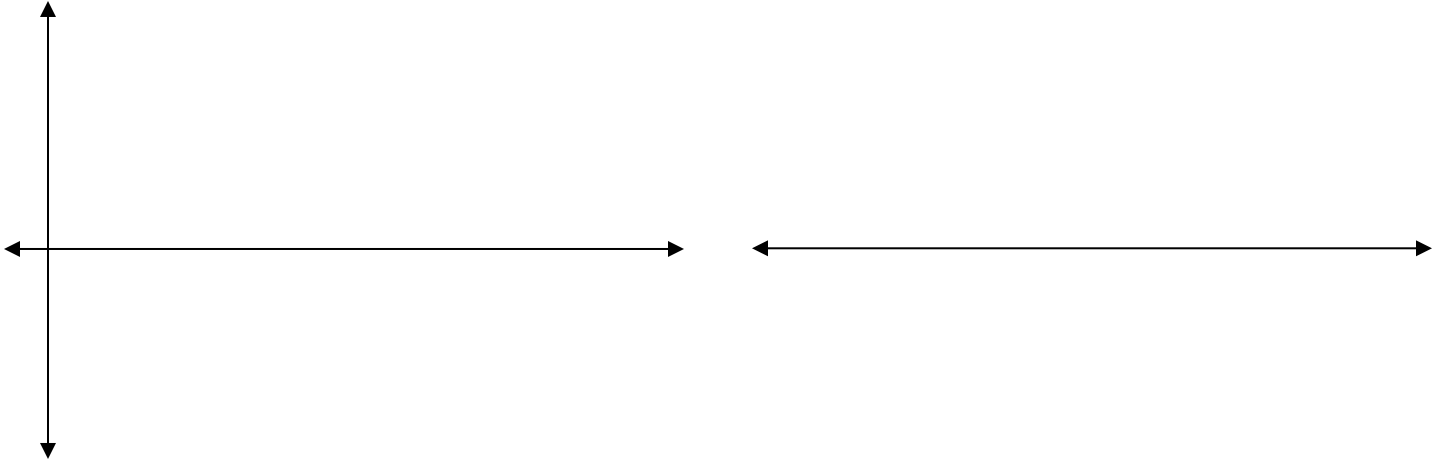


Trigonometric Graphs #3
Graphs of Cosecant, Secant, and Cotangent
Without Shifts

Determine the amplitude and period or critical points. Then graph two periods of the function.

1. $y = -\csc \frac{\pi}{2} x$

2. $f(x) = 3 \cot 2x$

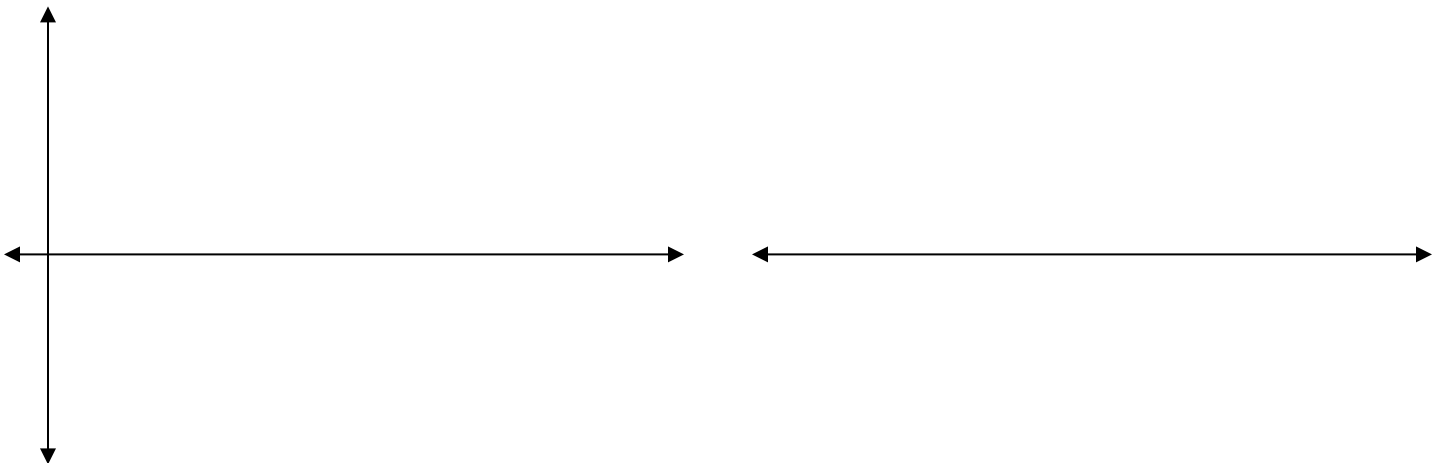


Amplitude: _____ Period: _____

Critical Points: _____ Period: _____

3. $y = \sec 2x$

4. $y = -\cot 4\pi x$



Amplitude: _____ Period: _____

Critical Points: _____ Period: _____

5. $f(x) = -2 \sec \frac{\pi}{3} x$



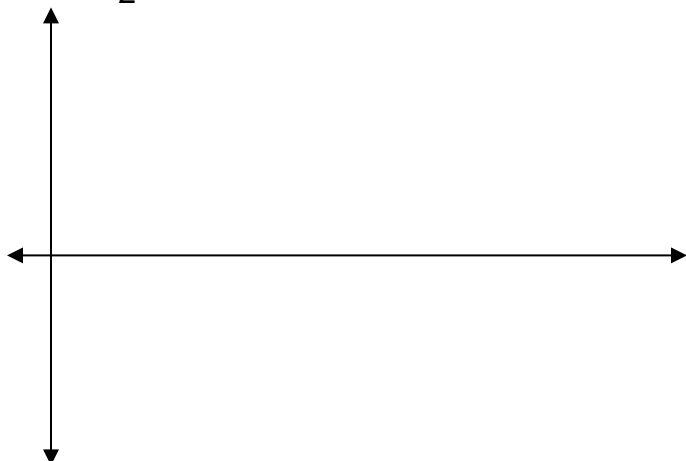
Amplitude: _____ Period: _____

6. $f(x) = \csc \frac{3}{2} x$



Amplitude: _____ Period: _____

7. $y = \frac{1}{2} \sec \pi x$



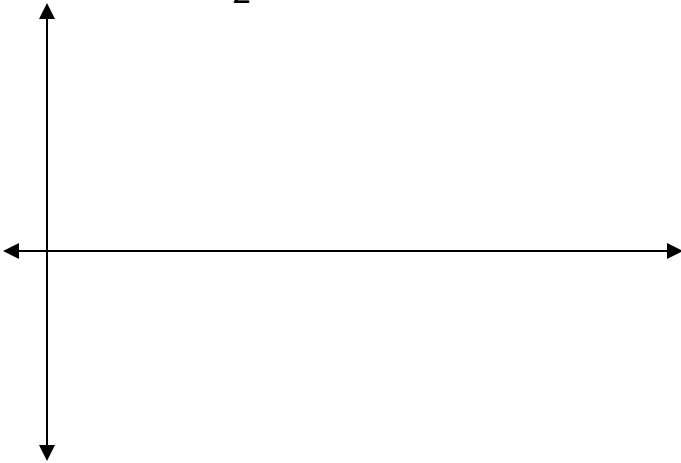
Amplitude: _____ Period: _____

8. $f(x) = \frac{2}{3} \cot \frac{x}{2}$

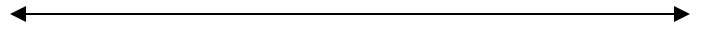


Critical Points: _____ Period: _____

9. $f(x) = 3\csc\frac{\pi}{2}x$



10. $y = -2\cot 2\pi x$

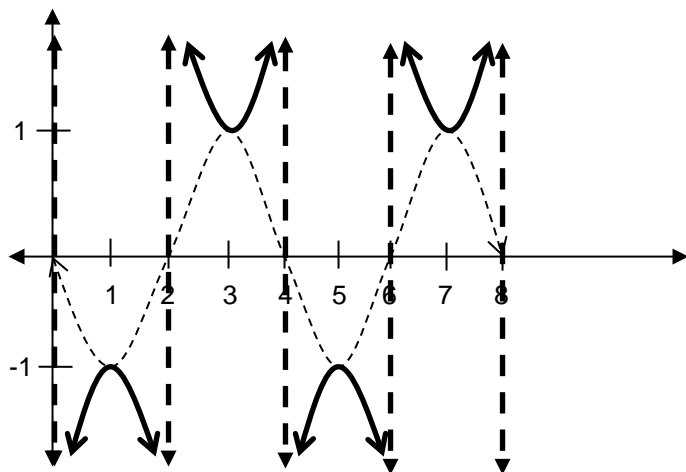


Amplitude: _____ Period: _____

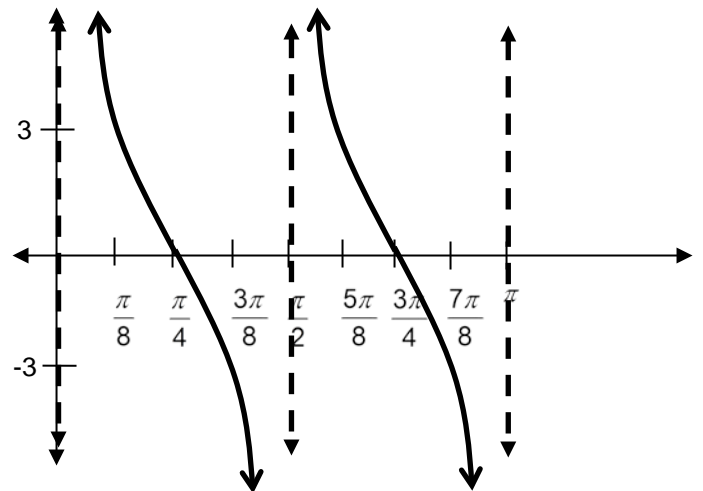
Critical Points: _____ Period: _____

Answers

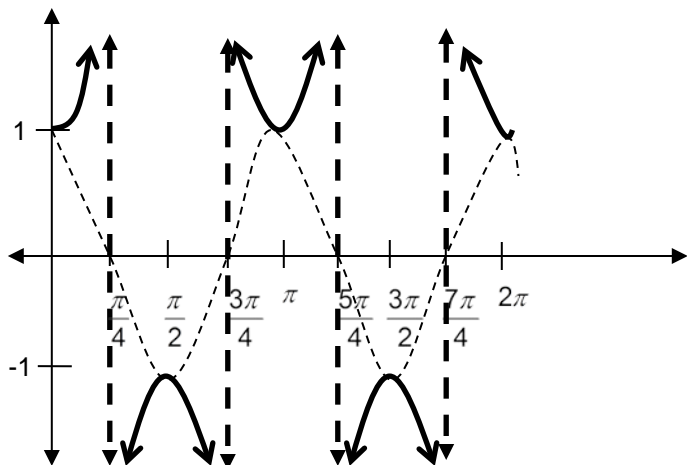
1. Amplitude: 1 Period: 4



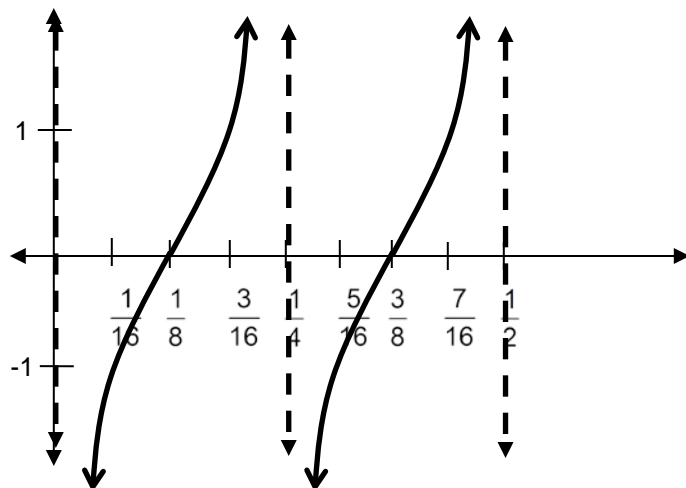
2. Critical Points: -3, 3 Period: $\frac{\pi}{2}$



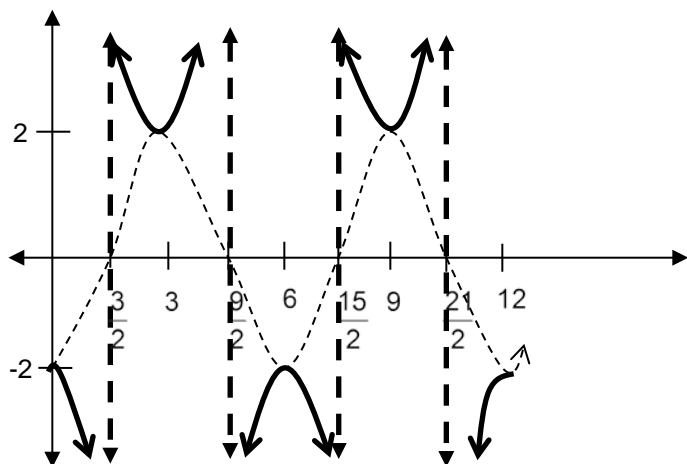
3. Amplitude: 1 Period: π



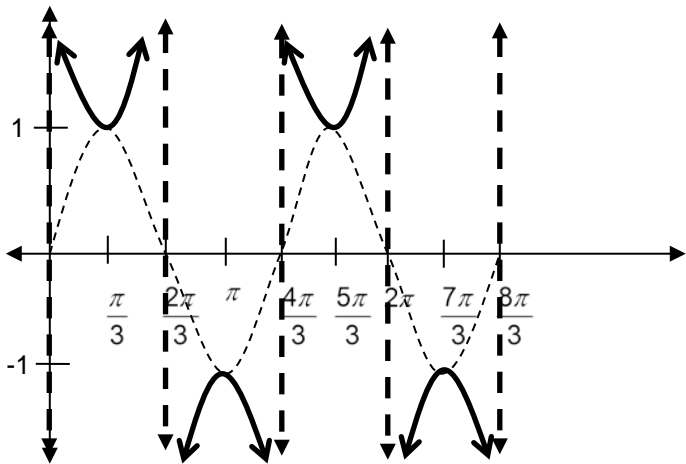
4. Critical Points: -1, 1 Period: $\frac{1}{4}$



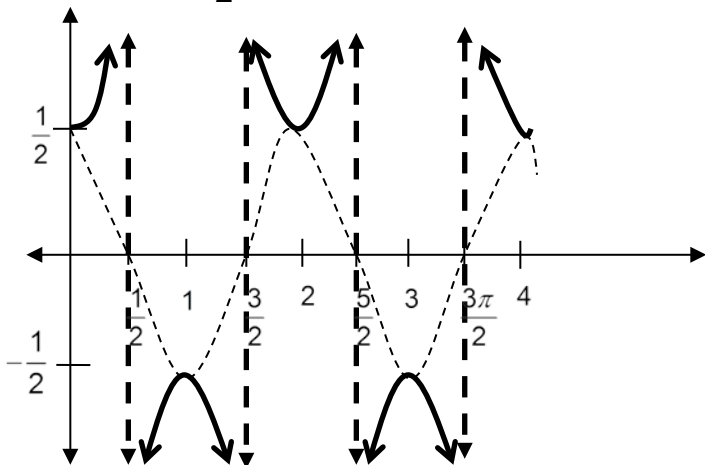
5. Amplitude: 2 Period: 6



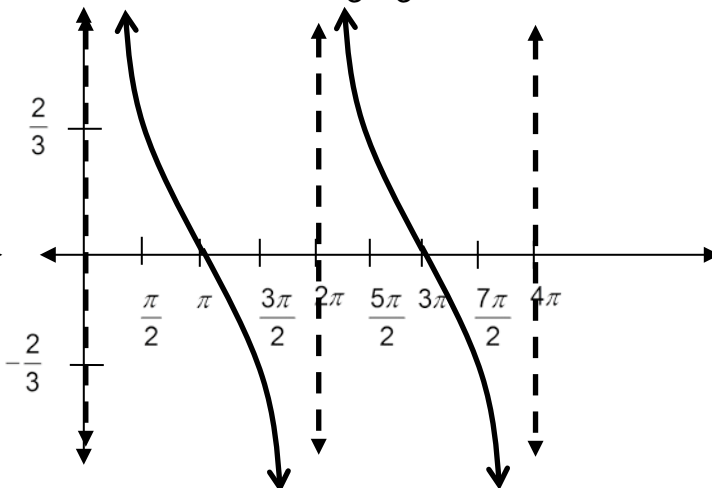
6. Amplitude: 1 Period: $\frac{4\pi}{3}$



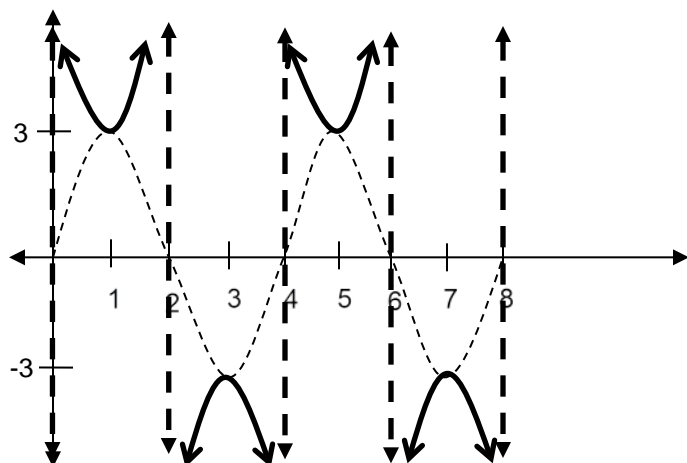
7. Amplitude: $\frac{1}{2}$ Period: 2



8. Critical Points: $-\frac{2}{3}, \frac{2}{3}$ Period: 2π



9. Amplitude: 3 Period: 4



10. Critical Points: -2, 2 Period: $\frac{1}{2}$

