Algebra II/Trig B Name _____

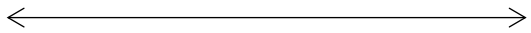
Final Review
Module 3, Unit 7

1. Complete the chart.

Graph	Period	Interval	Phase Shift or Asymptotes
$\sin\theta/\csc\theta$			
$\cos\theta/\sec\theta$			
$\tan\theta$			
$\cot\theta$			

Graph one period of each function.

2. $y = -2\cos\left(\frac{x}{2} - \pi\right) + 2$



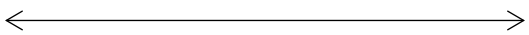
Amplitude: ____

Period: _____

Interval: ____

Phase Shift: _____

3. $y = 2\csc\left(\frac{x}{4} - \frac{\pi}{2}\right)$



Amplitude: ____

Period: _____

Interval: ____

Phase Shift: _____

4. $y = 3\tan 2x$

Critical Points: ____

Period: _____

Interval: ____

Asymptotes: _____

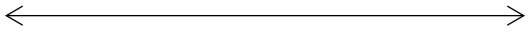
5. $y = -\cot(2x - \pi)$

Critical Points: ____

Period: _____

Interval: ____

Asymptotes: _____

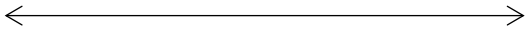


6. $y = 5\sin 2x + 3$

Amplitude: ____

Period: _____

Interval: ____



Find the exact value or angle of each expression. Show all necessary work.

7. $\tan^{-1}\left(\frac{\sqrt{3}}{3}\right)$

8. $\sec\left[\sin^{-1}\left(-\frac{1}{3}\right)\right]$

9. $\csc\left(\cos^{-1}-\frac{5}{13}\right)$

10. $\sin^{-1}\left(\sin\frac{3\pi}{4}\right)$

11. $\cos^{-1}\left(-\frac{1}{2}\right)$

12. $\tan\left[\cos^{-1}\left(-\frac{3}{5}\right)\right]$

13. $\tan^{-1}\left(\tan\frac{2\pi}{3}\right)$

14. $\cos^{-1}\left(\cos\frac{5\pi}{6}\right)$

Verify the following identities.

15. $\cos x + \sin x \tan x = \sec x$

16. $\frac{1}{\sin t - 1} + \frac{1}{\sin t + 1} = -2\tan t \sec t$

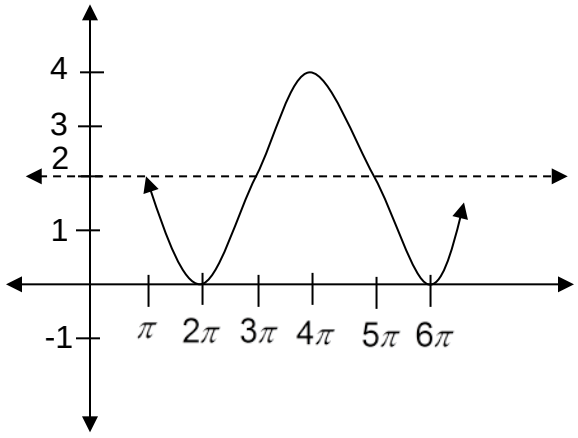
17. $\csc t + \cot t = \dfrac{\sin t}{1 - \cos t}$

18. $1 - \dfrac{\sin^2 x}{1 + \cos x} = \cos x$

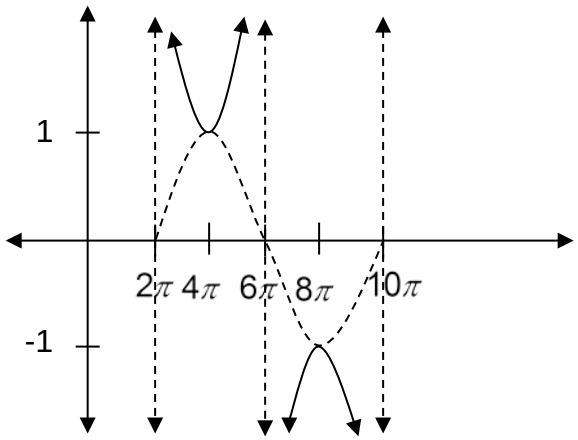
1.

Graph	Period	Interval	Phase Shift or Asymptotes
$\sin\theta / \csc\theta$	$\dfrac{2\pi}{b}$	period x $\dfrac{1}{4}$	$\dfrac{c}{b}$
$\cos\theta / \sec\theta$	$\dfrac{2\pi}{b}$	period x $\dfrac{1}{4}$	$\dfrac{c}{b}$
$\tan\theta$	$\dfrac{\pi}{b}$	period x $\dfrac{1}{4}$	$bx - c = \dfrac{\pi}{2}$ $bx - c = -\dfrac{\pi}{2}$
$\cot\theta$	$\dfrac{\pi}{b}$	period x $\dfrac{1}{4}$	$bx - c = 0$ $bx - c = \pi$

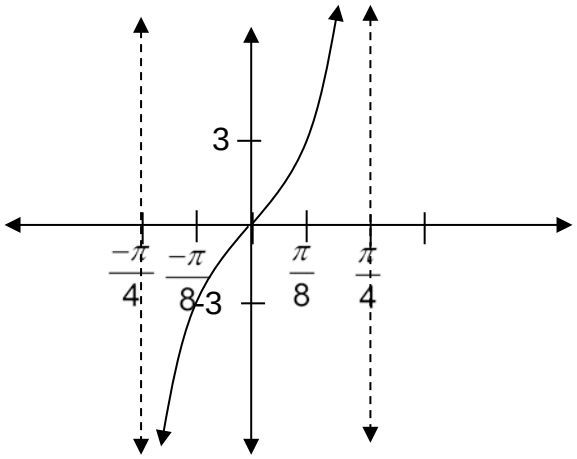
2.



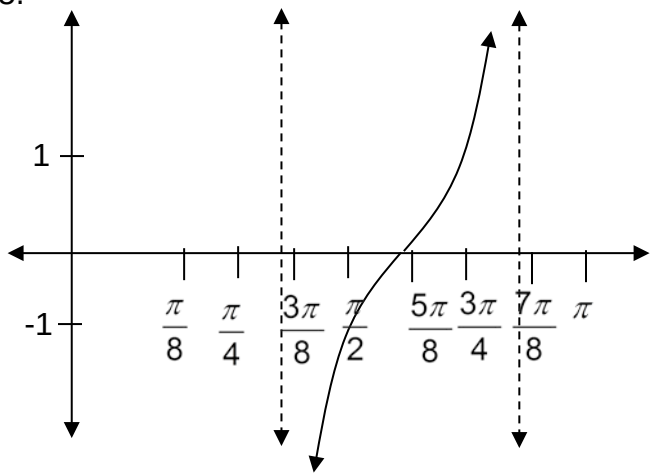
3.



4.



5.



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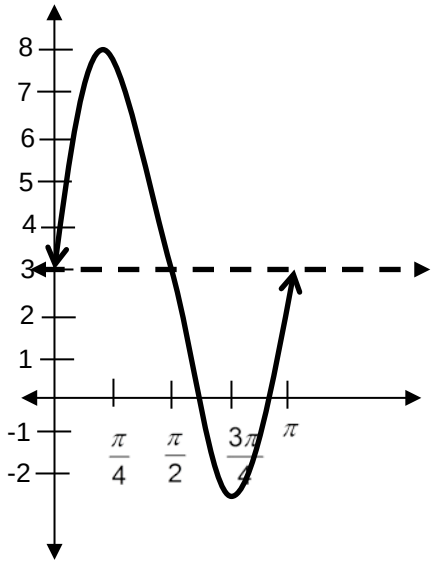

7. $\frac{\pi}{6}$

8. $\frac{3\sqrt{2}}{4}$

9. $\frac{13}{12}$

10 $\frac{\pi}{4}$

11. $\frac{2\pi}{3}$

12. $-\frac{4}{3}$

13. $-\frac{\pi}{3}$

14. $\frac{5\pi}{6}$