

3.8 The Tangent Function

AP Precalculus

Name: _____

CA #1

Write an equation that represents all asymptotes of the graph of f in the xy -plane.

1. $f(\theta) = \tan(8\theta)$

2. $f(\theta) = \tan\left(\frac{\theta}{2}\right)$

In the xy -plane, the angle θ is in standard position. What is the slope of the terminal ray of the angle?

3. $\theta = \frac{2\pi}{3}$

4. $\theta = \frac{5\pi}{4}$

Evaluate.

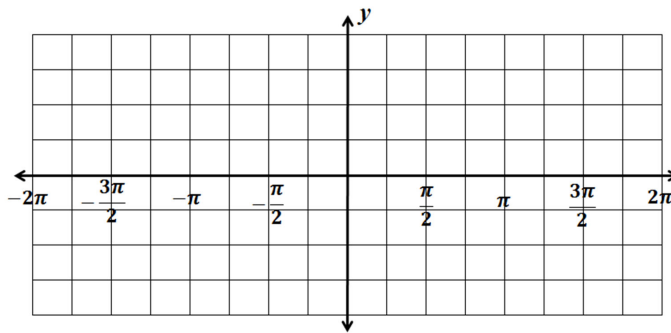
5. $\tan\frac{5\pi}{6}$

6. $\tan 2\pi$

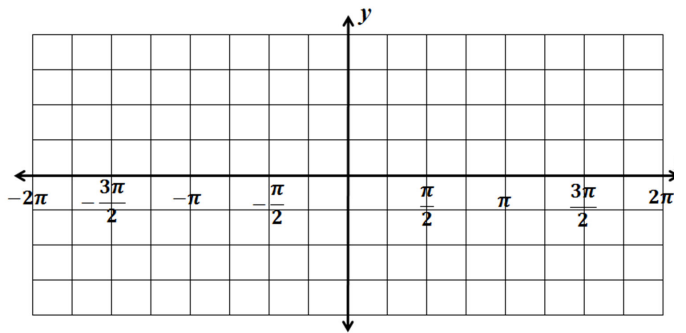
7. $\tan\frac{\pi}{6}$

Graph each trig function.

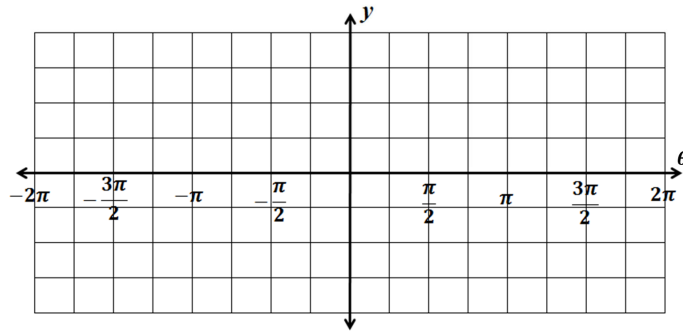
8. $y = \tan\left(\theta + \frac{\pi}{2}\right) - 2$



9. $y = 1 - 4 \tan\left(\frac{\theta}{2}\right)$



10. $y = \tan\left(\theta - \frac{\pi}{4}\right) - 3$



Answers to 3.8 CA #1

1. $\theta = \frac{\pi}{16} + k\frac{\pi}{8}$, for integer values of k .	2. $\theta = \pi + k2\pi$, for integer values of k .	3. $-\sqrt{3}$	4. 1
5. $\frac{1}{-\sqrt{3}} = -\frac{\sqrt{3}}{3}$	6. 0	7. $\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$	
8.	9.	10.	