

Practice 13-6

The Tangent Function

Identify the period and tell where the asymptotes occur, in the interval from 0 to 2π , for each function.

1. $y = \tan \theta$

2. $y = 2 \tan \frac{\theta}{2}$

3. $y = 3 \tan \frac{\theta}{4}$ *Make a table to see where "undefineds" are

4. $y = 4 \tan 2\theta$

5. $y = -\tan \frac{\pi}{2} \theta$

6. $y = -2 \tan \pi \theta$

7. $y = -3 \tan 2\theta$

8. $y = -4 \tan \theta$

9. $y = 0.5 \tan \pi \theta$

Sketch two cycles of the graph of each function.

Graph using our process.

10. $y = \tan \theta$

11. $y = 2 \tan \theta$

12. $y = -\tan \theta$

13. $y = -2 \tan \theta$

14. $y = -0.5 \tan 2\theta$

15. $y = 3 \tan \theta$

16. $y = -3 \tan 2\theta$

17. $y = 5 \tan \frac{\pi}{2} \theta$

18. $y = 2 \tan 3\theta$

19. $y = 0.5 \tan 2\theta$

20. $y = -2.5 \tan \frac{\pi}{2} \theta$

21. $y = -5 \tan 2\pi \theta$

22. $y = -2 \tan 4\theta$

23. $y = -0.25 \tan 3\theta$

24. $y = -4 \tan 4\pi \theta$

25. $y = -2.25 \tan \theta$

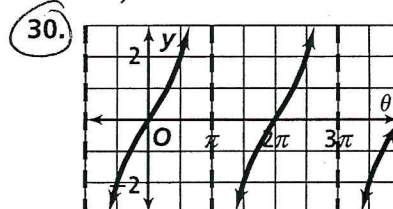
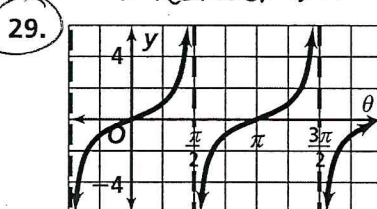
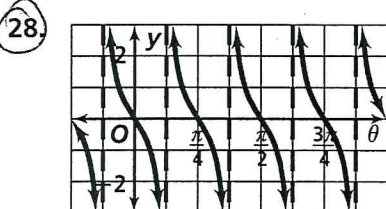
26. $y = -0.25 \tan \frac{\pi}{3} \theta$

27. $y = 0.75 \tan 4\theta$

Identify the period of each tangent function.

*Remember

$P = \pi$, so $b = \pi/p$ and $P = \pi/b$



Use the graph of $y = \tan \theta$ to find each value. If the tangent is undefined at that point, write *undefined*.

31. $\tan \frac{\pi}{2}$

32. $\tan \left(-\frac{3\pi}{4} \right)$

33. $\tan \left(-\frac{\pi}{4} \right)$

34. $\tan \frac{3\pi}{2}$

Using your graphing calculator, graph each function on the interval $0^\circ < x < 470^\circ$ and $-300 < y < 300$. Evaluate the function at $x = 45^\circ, 90^\circ$, and 135° .

35. $y = 200 \tan x$

36. $y = -75 \tan \left(\frac{1}{4}x \right)$

37. $y = -50 \tan x$

*Also do Tuesday's pink slot probs!

Turn in what you complete in class. Finish remaining problems at home if necessary.