Name:_____Class:_____Date:_____

PreAP PreCalculus Graphing Tangent and Cotangent

Determine the period of each function.

1. $y = \tan 1/4x$ 2. $y = \cot 2/3x$

Determine the phase shift of each function.

3. $y = \tan (x - \pi/4)$ 4. $y = \cot (2x + \pi)$

Determine the period, the phase shift, and the vertical shift, if any, of each function. Describe any vertical stretching or shrinking. DO NOT GRAPH THIS SECTION.

5. $y = \tan 3(x - \pi)$ 6. $y = 3 \cot 2(x + \pi)$ 7. $y = \tan (x - \pi/4)$

8. $y = \cot (x + 2\pi/3)$ 9. $y = \tan 2(x + \pi) + 3$ 10. $y = \cot (x - 5\pi/6) + 4$

11. $y = 3 \tan (x - \pi/6) + 2$ 12. $y = -4 \tan (x - 3\pi/4) - 3$

Graph each function over a **two-period** interval. Don't forget the asymptotes!

13. $y = \cot 2x$ 14. $y = 4 \cot 2x$ 15. $y = \tan (x - \pi)$

16. $y = \cot 2(x - 3\pi/4)$ 17. $y = \tan 2x + 1$ 18. $y = \tan (x - 2\pi/3) + 2$

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