

Pre-Calculus Worksheet

Tangent and Cotangent

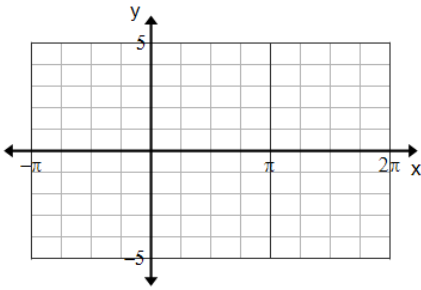
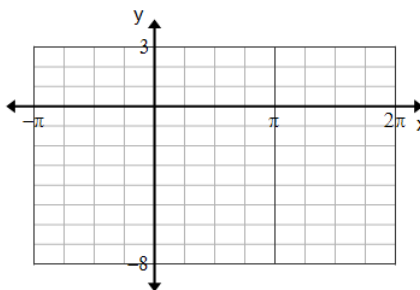
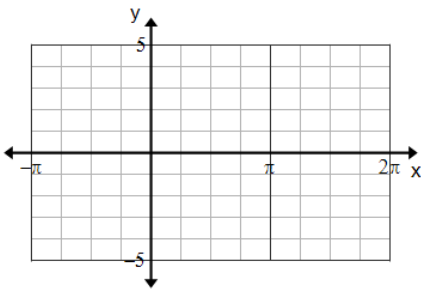
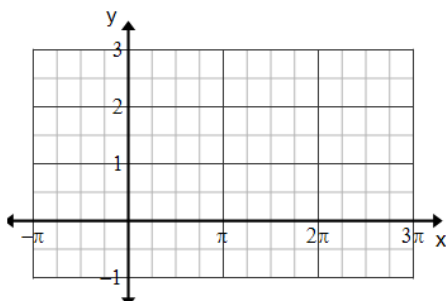
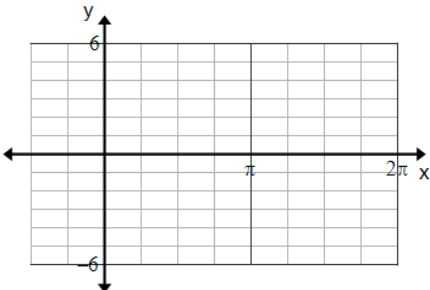
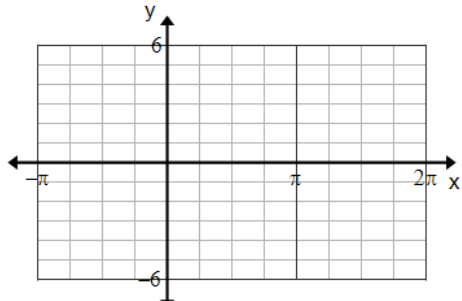
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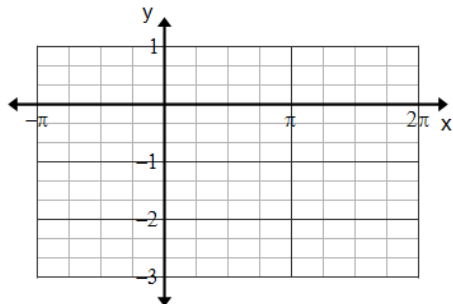
I. Fill in the chart for each function. DO NOT GRAPH. Remember to factor first when needed.

<p>1. $y = 2 \tan\left(\frac{1}{2}x\right) - 3$</p> <p>Amplitude:</p> <hr/> <p>Flip?</p> <hr/> <p>Vertical Shift:</p> <hr/> <p>Period:</p> <hr/> <p>Phase Shift:</p> <hr/>	<p>2. $y = \frac{4}{3} \cot\left(4\left(x - \frac{\pi}{2}\right)\right) + 1$</p> <p>Amplitude:</p> <hr/> <p>Flip?</p> <hr/> <p>Vertical Shift:</p> <hr/> <p>Period:</p> <hr/> <p>Phase Shift:</p> <hr/>	<p>3. $y = -5 \tan(3x + \pi)$</p> <p>Amplitude:</p> <hr/> <p>Flip?</p> <hr/> <p>Vertical Shift:</p> <hr/> <p>Period:</p> <hr/> <p>Phase Shift:</p> <hr/>
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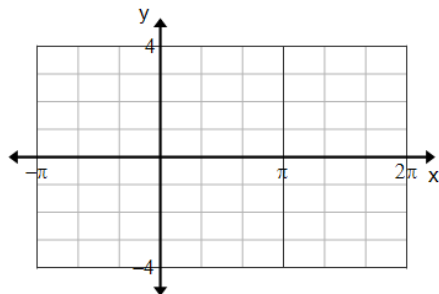
II. Graph each function, over one period, showing the vertical asymptotes.

<p>4. $y = \tan x + 2$</p> 	<p>5. $y = 2 \cot x - 3$</p> 
<p>6. $y = -3 \tan\left(\frac{1}{2}x\right) + 1$</p> 	<p>7. $y = \frac{1}{2} \cot\left(\frac{1}{3}x\right) + 1$</p> 
<p>8. $y = -4 \tan\left(x - \frac{\pi}{4}\right) - 1$</p> 	<p>9. $y = -\cot(x + \pi) - 3$</p> 

10. $y = -\frac{1}{3}\cot x - 1$

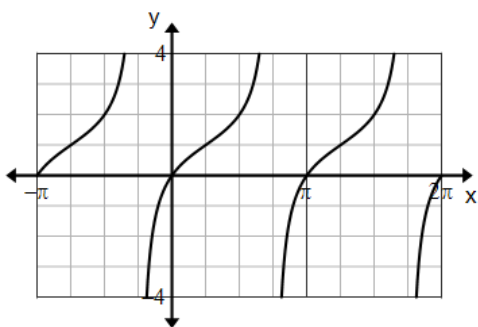


11. $y = 2 \tan\left(\frac{1}{2}\left(x + \frac{\pi}{3}\right)\right)$

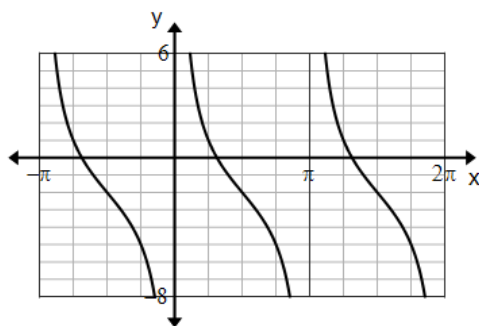


III. Write the equation for each trigonometric function.

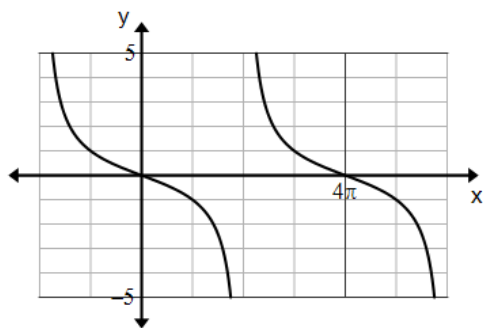
12.



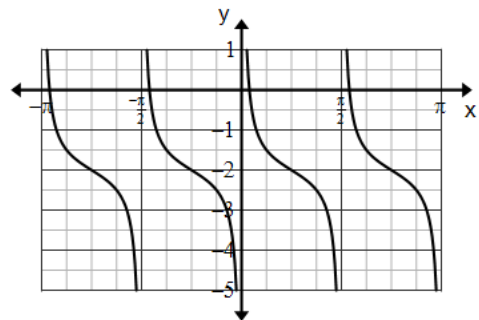
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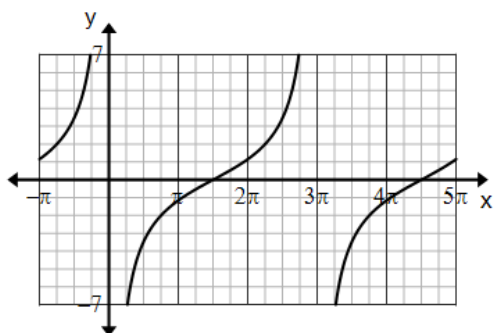
14.



15.



16.



17.

