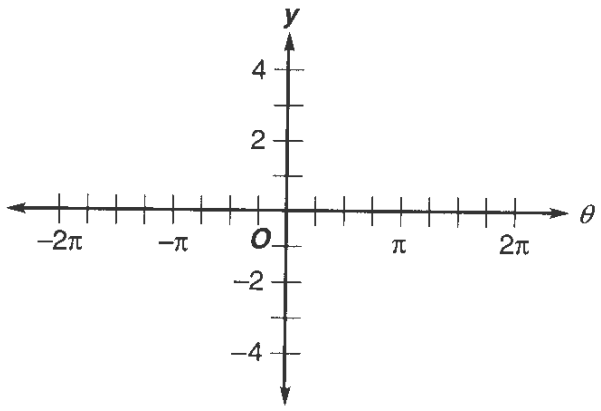
Algebra 2: Trigonometry Graphs and Identities Final Review 2015 Name:_____Period:__

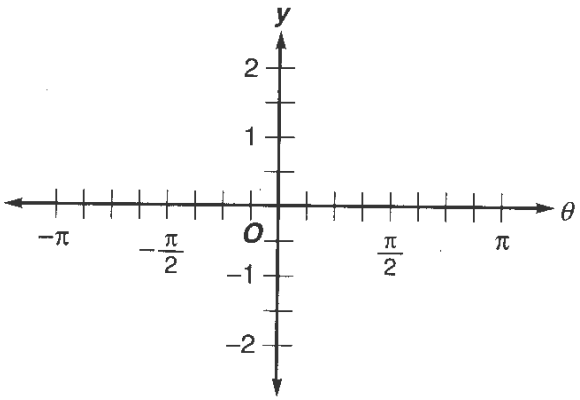
State the amplitude and period of each function. Then graph the function.

1. $y = \frac{1}{2}\cos\theta$



Amplitude_____Period:_____

2. $y = \tan 2\theta$



Amplitude_____Period:_____

Draw the angle in standard position in the correct quadrant.

3. Find the $\cos\theta$, if $0° \le \theta \le 90°$ and $\sin\theta = \frac{1}{2}$

4. Find the $\sec\theta$, if $90° \le \theta \le 180°$ and $\tan\theta = -\frac{4}{7}$

Simplify each trigonometric identity

5. $\dfrac{\tan\theta\csc\theta}{\sec\theta}$

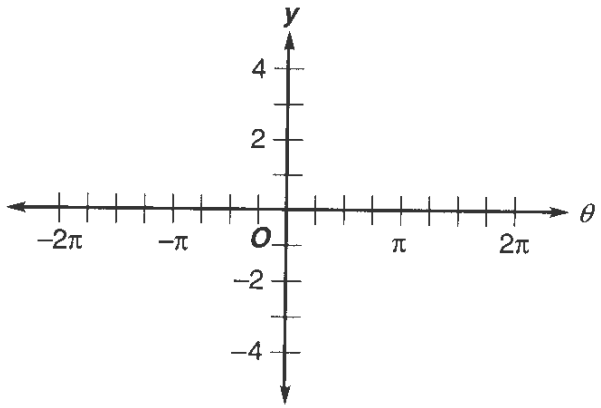
6. $\dfrac{\sin^2\theta - \cot^2\theta\tan\theta}{\cot\theta\sin\theta}$

7. $\dfrac{\cot^2\theta - 1}{1+\cot^2\theta}$

8. $\sin^2\alpha\left(\csc^2\alpha + \sec^2\alpha\right)$

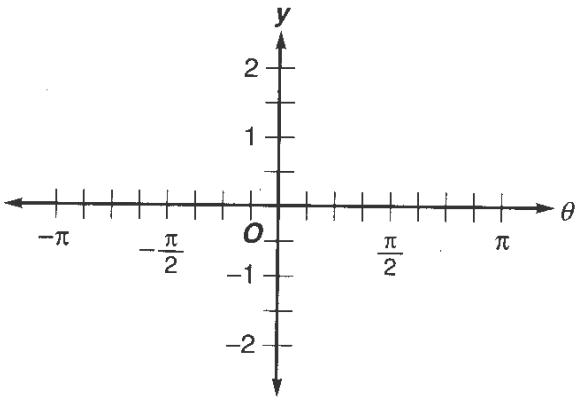
State the amplitude and period of each function. Then graph the function.

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



Amplitude_____Period:_____

10. $y = 2\cot\theta$



Amplitude_____Period:_____

Simplify each trigonometric identity

11. $\dfrac{1+\tan^2\theta}{\cos^2\theta}$

12. $\tan^2\beta - \sin^2\beta - \tan^2\beta\sin^2\beta$

Verify each identity to be true

13. $\sin\theta(\csc\theta - \sin\theta) = \cos^2\theta$

14.

$$\cos^2 x\cot^2 x = \cot^2 x - \cos^2 x$$

$$\cos^2 x\,\underline{\qquad\qquad} = \underline{\qquad\qquad} - \cos^2 x\cdot\underline{\qquad\qquad}$$

$$\underline{\cos^4 x} = \underline{\cos^2 x - \cos^2 x\sin^2 x}$$

$$\underline{\qquad\qquad} = \underline{\cos^2 x(\qquad\qquad)}$$

$$\underline{\qquad\qquad} = \underline{\qquad\qquad}$$