

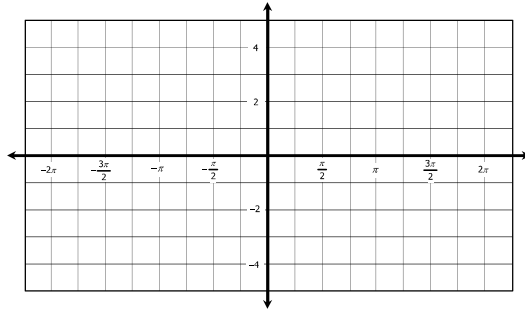
Graphing sin/cos/tan Functions

Date:

Identify the amplitude and period for each function, then graph.

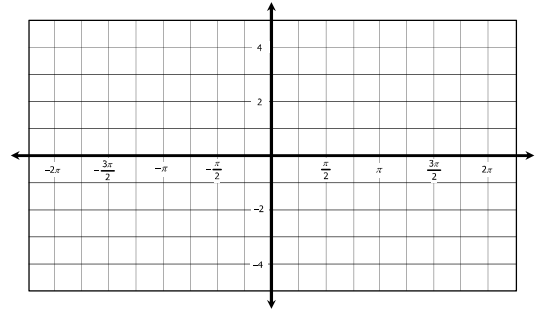
1. $y = 3 \cdot \sin \frac{4}{3} \theta$

Amp: _____ Period: _____



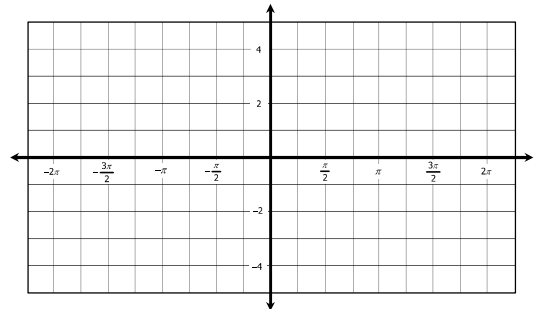
2. $y = \frac{9}{2} \cdot \cos \theta$

Amp: _____ Period: _____



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

Amp: _____ Period: _____



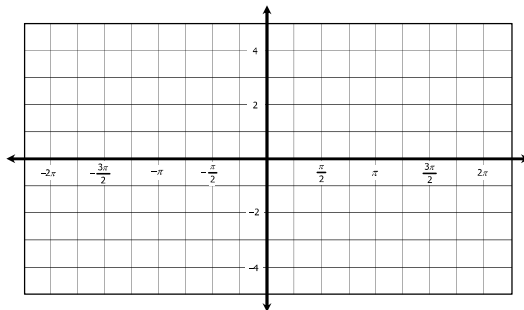
Graphing csc/sec/cot Functions

Date:

Identify the amplitude and period for each function, then graph.

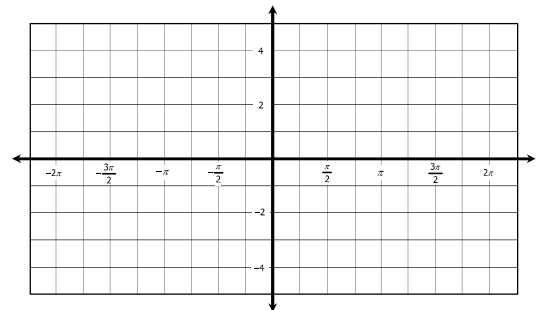
1. $y = \frac{1}{2} \cdot \csc 2\theta$

Amp: _____ Period: _____



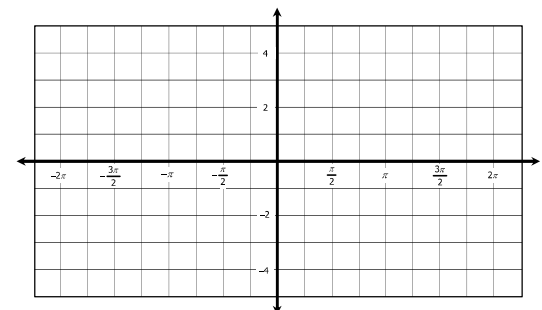
2. $y = 2 \cdot \sec \frac{8}{3} \theta$

Amp: _____ Period: _____



3. $y = \frac{1}{4} \cdot \cot \frac{1}{3} \theta$

Amp: _____ Period: _____

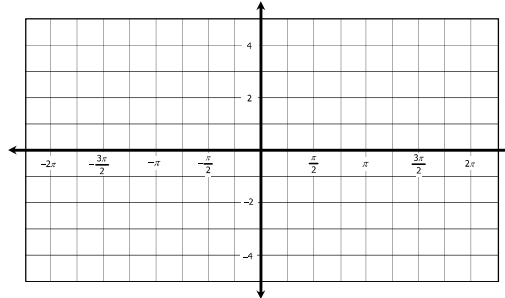


Translating Trigonometric Graphs

Date:

State the amplitude, period, phase shift, vertical shift, and midline for each function. Then graph.

1. $y = 3 \cdot \cos 2\left(\theta + \frac{3\pi}{2}\right) - 2$



Amplitude: _____

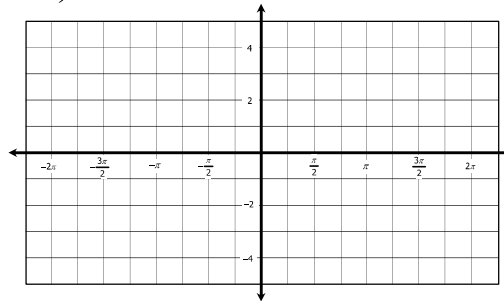
Period: _____

Phase Shift: _____

Vertical Shift: _____

Midline: _____

2. $y = \frac{1}{3} \cdot \tan\left(\theta - \frac{\pi}{2}\right) + 4$



Amplitude: _____

Period: _____

Phase Shift: _____

Vertical Shift: _____

Midline: _____

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Fundamental Trig Identities

Date:

Find the exact value of each expression if $180^\circ < \theta < 270^\circ$.

1. If $\sin \theta = -\frac{\sqrt{3}}{4}$, find $\sec \theta$.

2. If $\cot \theta = \frac{5}{2}$, find $\sin \theta$.

Simplify each expression.

3. $(\sec \theta + 1)(\sec \theta - 1) \cdot \cot \theta$

4. $\frac{\cos^2 \theta - \cos \theta \cdot \sec \theta}{\sin^3 \theta}$

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**Sum and
Difference of
Angles Identities**

Date:

Find the exact value of each function.

1. $\cos 255^\circ$

2. $\tan\left(-\frac{7\pi}{12}\right)$

3. Given angles A and B in quadrant II with $\sin A = \frac{4}{5}$ and $\sin B = \frac{12}{13}$
find $\sin(A - B)$.

**Double-Angle
& Half-Angle
Identities**

Date:

Find the exact value of each function.

1. $\tan \theta = -\frac{1}{5}$ and $\frac{\pi}{2} < \theta < \pi$; find $\sin 2\theta$.

2. $\cos \theta = -\frac{12}{13}$ and $\pi < \theta < \frac{3\pi}{2}$; find $\tan 2\theta$.

3. $\sin \theta = \frac{3}{5}$ and $\frac{\pi}{2} < \theta < \pi$; find $\cos \frac{\theta}{2}$.

Proving Identities

Date:

Prove each identity.

1. $1 - \sin \theta \cdot \cot \theta \cdot \cos \theta = \sin^2 \theta$

2. $\cot \theta = \frac{\cos 2\theta + 1}{\sin 2\theta}$

3. $\frac{\csc \theta \cdot \cot^2 \theta + \csc \theta}{\cot \theta \cdot \sec \theta} = \sec^2 \theta$

4. $\sin(\pi - \theta) \cdot \sin \theta + \cos 2\theta = \cos^2 \theta$

Solving Trigonometric Equations

Date:

Solve for the interval $0 < \theta < 360^\circ$. Give all solutions in **degrees**.

1. $4 \tan \theta - \sqrt{3} = 7 \tan \theta$

2. $2 \sin \theta \tan \theta - \sqrt{3} \tan \theta = 0$

Solve for the interval $\frac{\pi}{2} < \theta < \frac{3\pi}{2}$. Give all solutions in **radians**.

3. $2 \cos^2 \theta - 5 \cos \theta = 3$

4. $4 - 4 \cos^2 \theta - \tan \theta \cdot \cot \theta = 0$