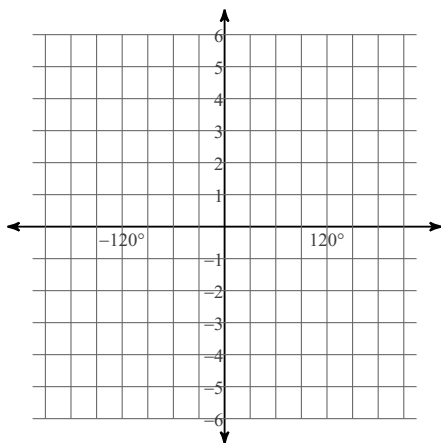


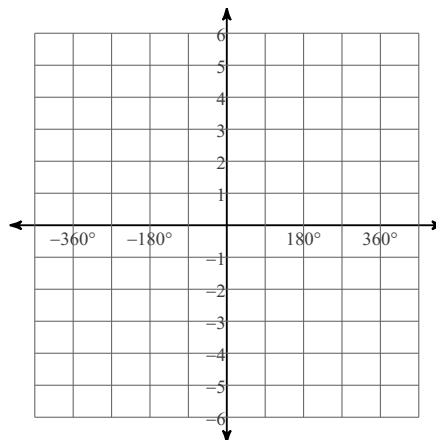
Extra Practice Trig. Graphs

Graph each function using degrees.

1) $y = 3\cot 2\theta$

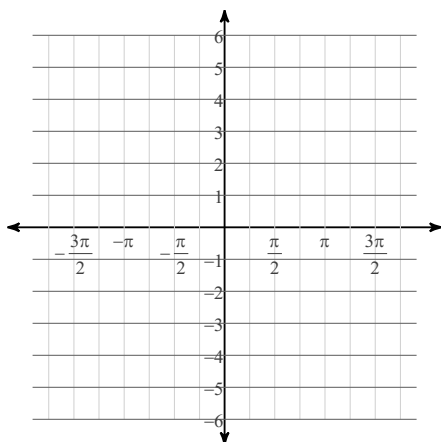


2) $y = \frac{1}{2} \cdot \tan \frac{\theta}{3}$

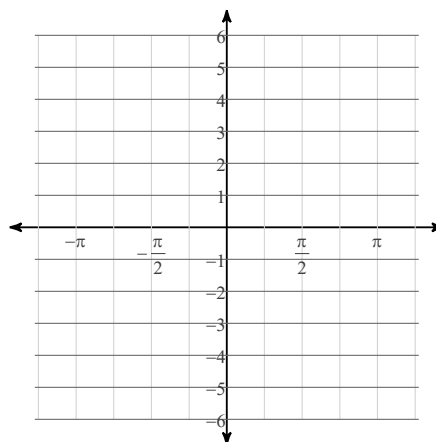


Graph each function using radians.

3) $y = 2\tan\left(\frac{\theta}{2} + \frac{\pi}{6}\right)$

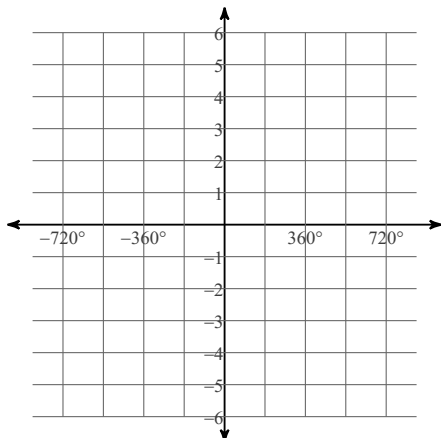


4) $y = \frac{1}{2} \cdot \sin\left(4\theta + \frac{3\pi}{2}\right)$

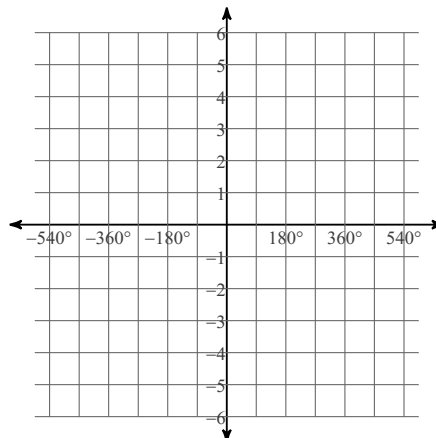


Graph each function using degrees.

$$5) y = \frac{1}{2} \cdot \csc \frac{\theta}{3} + 1$$

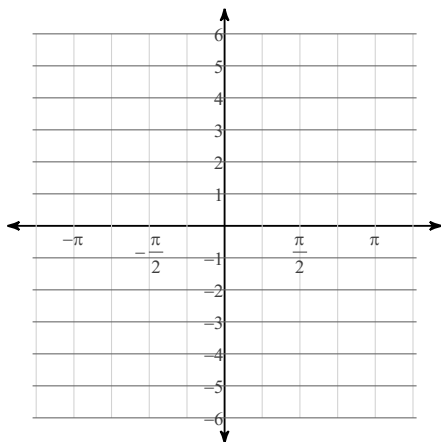


$$6) y = 1 + 2\sec \frac{\theta}{2}$$

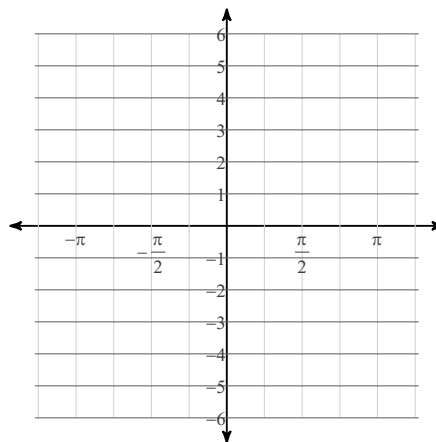


Graph each function using radians.

$$7) y = 4\cos \left(3\theta + \frac{\pi}{4} \right) + 2$$



$$8) y = 2\sec \left(2\theta - \frac{3\pi}{4} \right) - 1$$



Find the amplitude, the period in radians, the phase shift in radians, the vertical shift, and two vertical asymptotes (if any), domain, and range.

$$9) y = 2\sec \left(2\theta + \frac{5\pi}{3} \right)$$

$$10) y = 7\tan \left(5\theta + \frac{\pi}{6} \right)$$

$$11) y = 7\csc \left(\frac{\theta}{2} + \frac{5\pi}{6} \right)$$

$$12) y = 10\sin \left(\frac{\theta}{8} - \frac{5\pi}{6} \right)$$

Find the exact value of each trigonometric function.

$$13) \sin -390^\circ$$

$$14) \cot 360^\circ$$

$$15) \tan -480^\circ$$

$$16) \sec 405^\circ$$

$$17) \cot -390^\circ$$

$$18) \cos -630^\circ$$

$$19) \cos 690^\circ$$

$$20) \sin -225^\circ$$

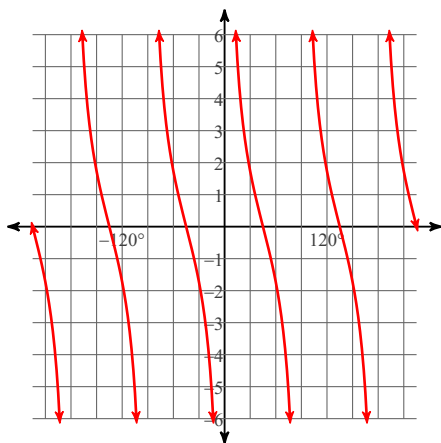
$$21) \csc 480^\circ$$

$$22) \cos -855^\circ$$

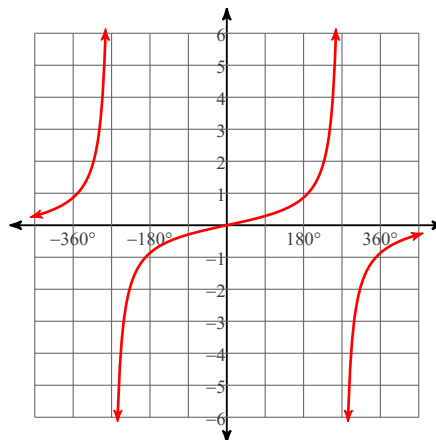
Extra Practice Trig. Graphs

Graph each function using degrees.

1) $y = 3\cot 2\theta$

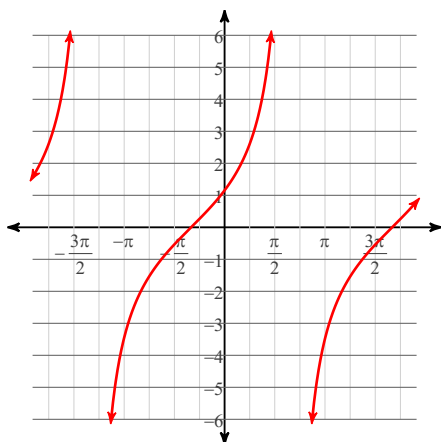


2) $y = \frac{1}{2} \cdot \tan \frac{\theta}{3}$

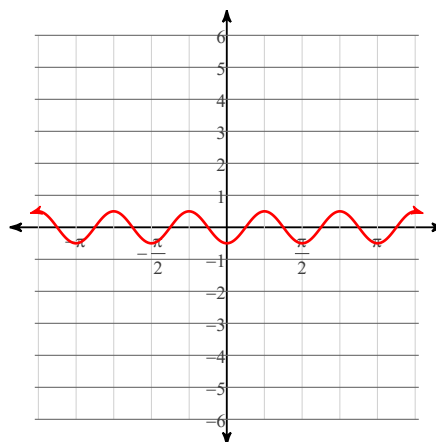


Graph each function using radians.

3) $y = 2\tan\left(\frac{\theta}{2} + \frac{\pi}{6}\right)$

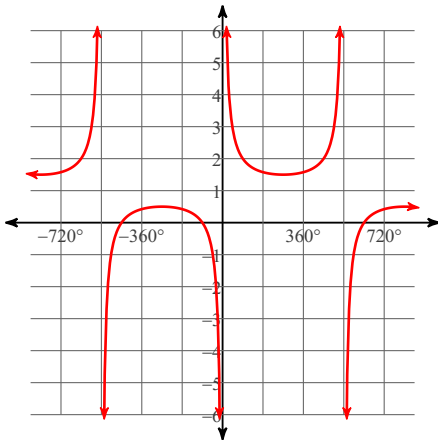


4) $y = \frac{1}{2} \cdot \sin\left(4\theta + \frac{3\pi}{2}\right)$

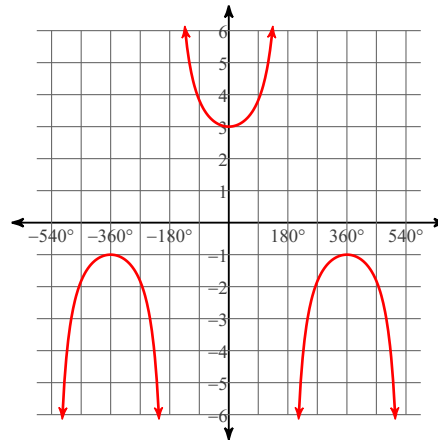


Graph each function using degrees.

5) $y = \frac{1}{2} \cdot \csc \frac{\theta}{3} + 1$

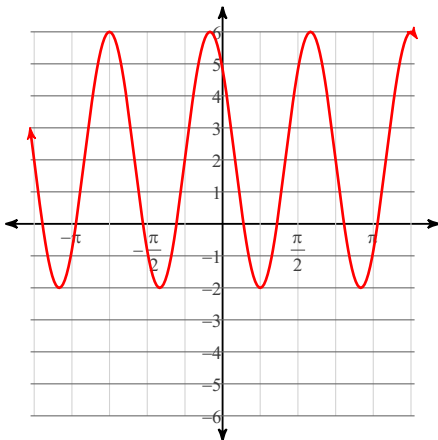


6) $y = 1 + 2\sec \frac{\theta}{2}$

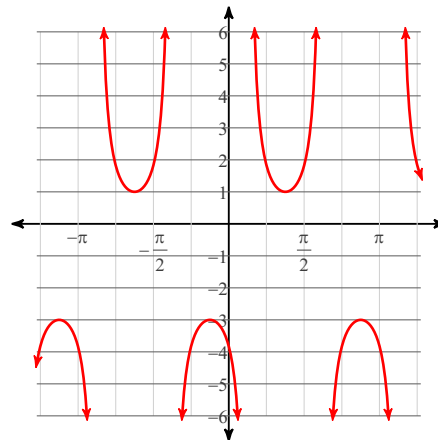


Graph each function using radians.

7) $y = 4\cos\left(3\theta + \frac{\pi}{4}\right) + 2$



8) $y = 2\sec\left(2\theta - \frac{3\pi}{4}\right) - 1$



Find the amplitude, the period in radians, the phase shift in radians, the vertical shift, and two vertical asymptotes (if any), domain, and range.

9) $y = 2\sec\left(2\theta + \frac{5\pi}{3}\right)$ Amplitude: None
Period: π

10) $y = 7\tan\left(5\theta + \frac{\pi}{6}\right)$ Amplitude: None
Period: $\frac{\pi}{5}$

11) $y = 7\csc\left(\frac{\theta}{2} + \frac{5\pi}{6}\right)$ Phase shift: Left $\frac{5\pi}{6}$
Amplitude: None
Period: 4π
Vert. shift: None

12) $y = 10\sin\left(\frac{\theta}{8} - \frac{5\pi}{6}\right)$ Amplitude: 10
Phase shift: Left $\frac{\pi}{30}$
Period: 16π
Vert. shift: None

Find the exact value of each trigonometric function.

13) $\sin -390^\circ = -\frac{1}{2}$
14) $\cot 360^\circ = \text{Undefined}$
15) $\tan -480^\circ = \sqrt{3}$
16) $\sec 405^\circ = \sqrt{2}$
17) $\cot -390^\circ = -\sqrt{3}$
18) $\cos -630^\circ = 0$
19) $\cos 690^\circ = \frac{\sqrt{3}}{2}$
20) $\sin -225^\circ = \frac{\sqrt{2}}{2}$
21) $\csc 480^\circ = \frac{2\sqrt{3}}{3}$
22) $\cos -855^\circ = -\frac{2\sqrt{2}}{2}$