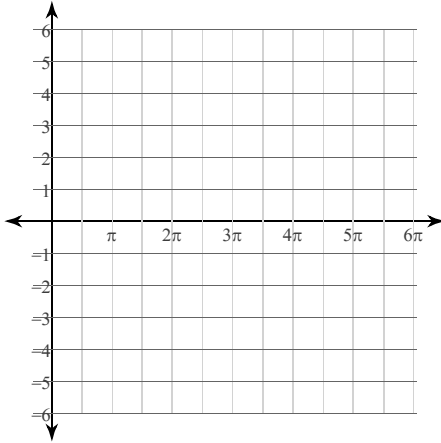


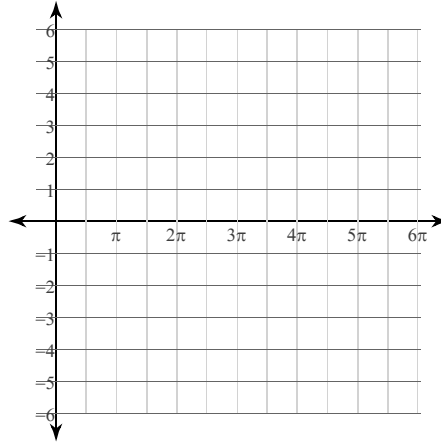
Sinusoidal Transformations

Graph each function using radians.

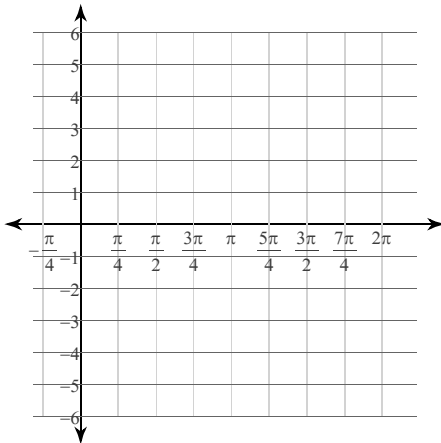
1) $y = 2\sec \frac{\theta}{2}$



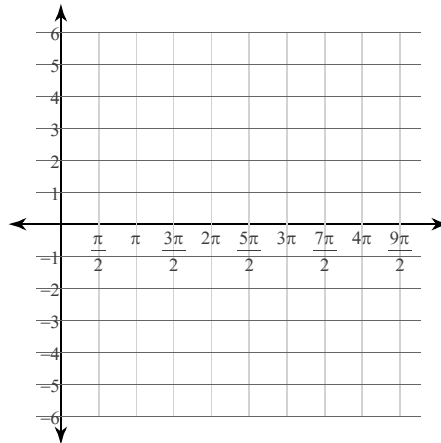
2) $y = 3\cos \frac{\theta}{2}$



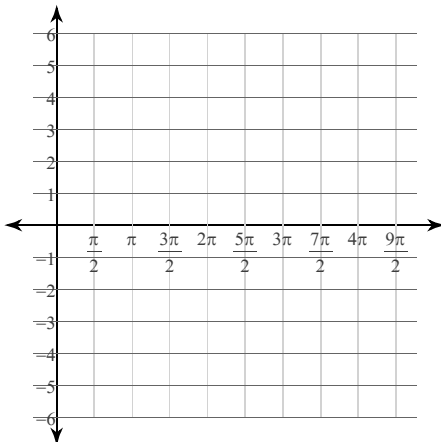
3) $y = \frac{1}{2} \cdot \sin 2\theta$



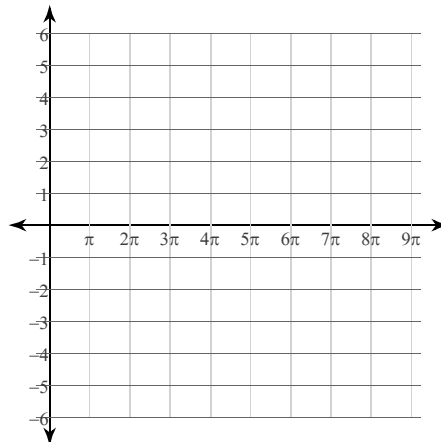
4) $y = \cot \frac{\theta}{3}$



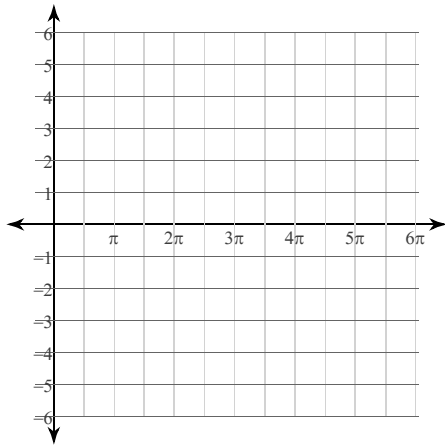
5) $y = 4\cot \frac{\theta}{3}$



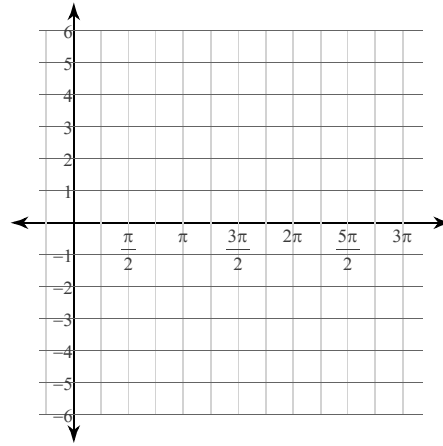
6) $y = \csc \frac{\theta}{3}$



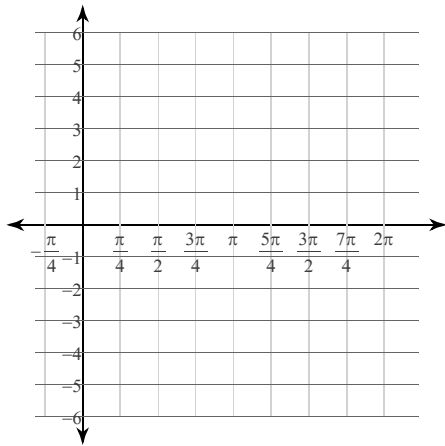
$$7) y = 2\csc \frac{\theta}{2}$$



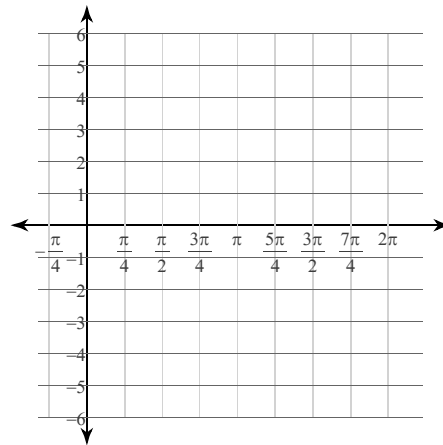
$$8) y = 3\cos \theta$$



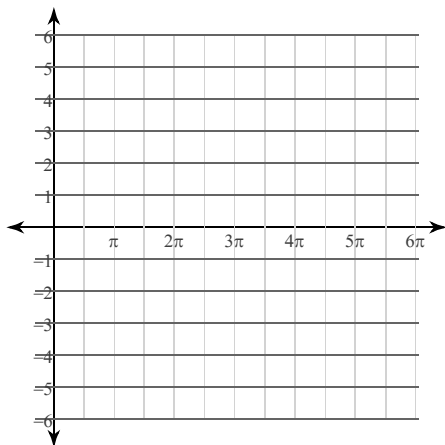
$$9) y = \frac{1}{2} \cdot \csc 2\theta$$



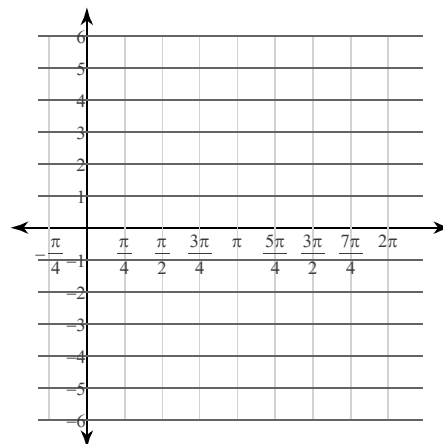
$$10) y = 3\sec 2\theta$$



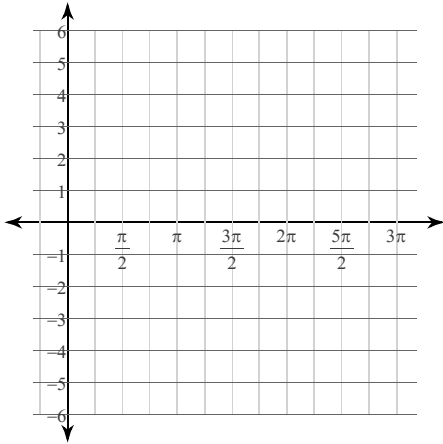
$$11) y = 3\sin \frac{\theta}{2}$$



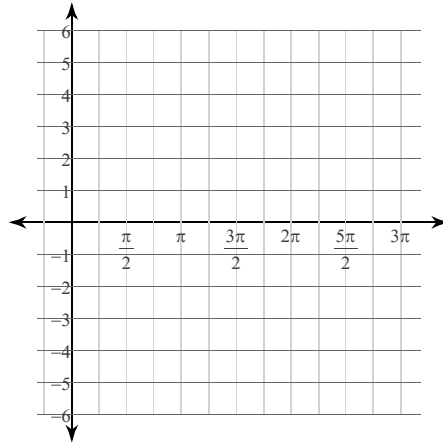
$$12) y = \cot 2\theta$$



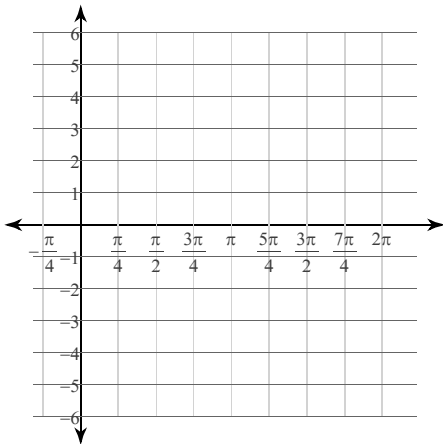
$$13) y = \sec\left(\theta + \frac{\pi}{6}\right) + 1$$



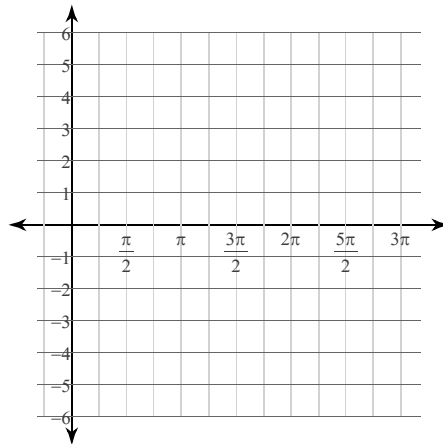
$$14) y = \sin\left(\theta - \frac{3\pi}{4}\right) + 1$$



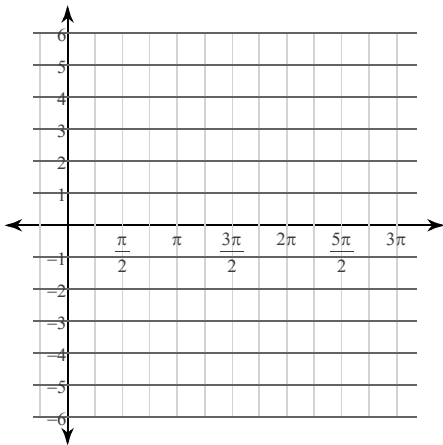
$$15) y = 1 + \cot\left(\theta + \frac{3\pi}{4}\right)$$



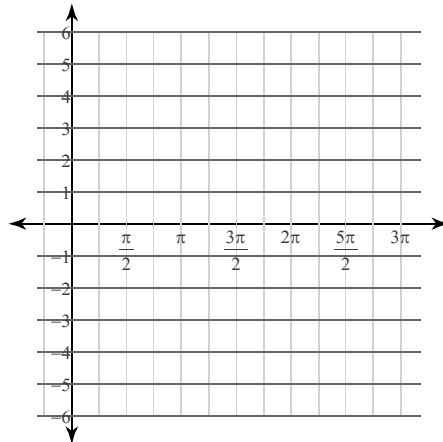
$$16) y = \sec\left(\theta - \frac{\pi}{6}\right) - 1$$



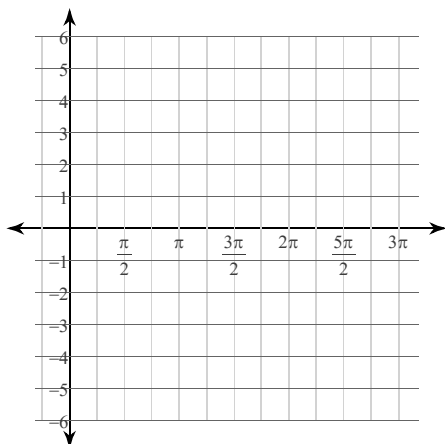
$$17) y = \sin\left(\theta - \frac{2\pi}{3}\right) + 2$$



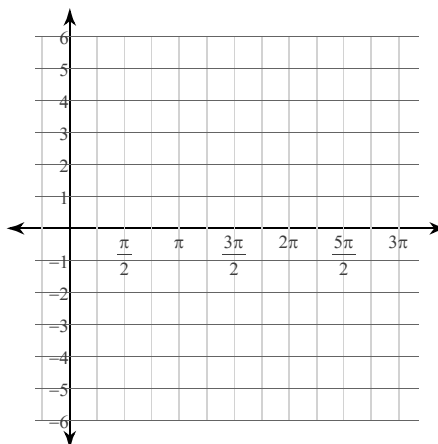
$$18) y = 1 + \sin \theta$$



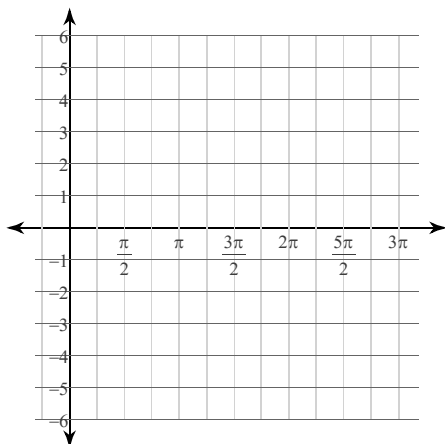
$$19) y = \sec\left(\theta + \frac{5\pi}{6}\right)$$



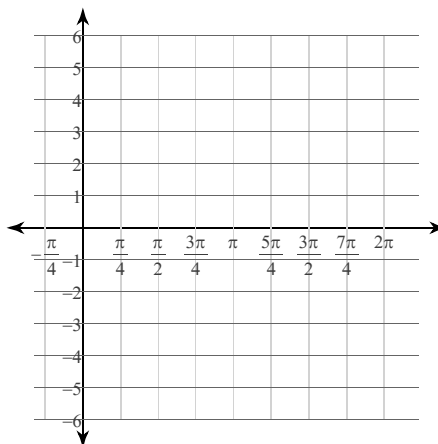
$$20) y = \cos\left(\theta + \frac{\pi}{4}\right) - 2$$



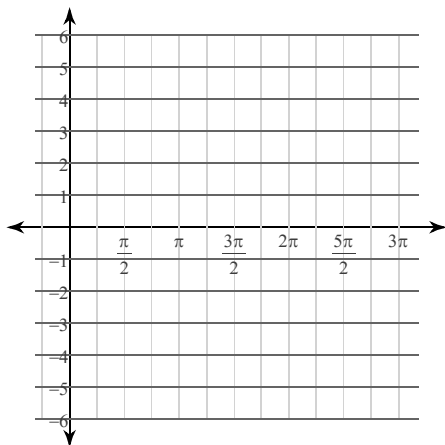
$$21) y = \csc\left(\theta - \frac{5\pi}{6}\right) + 2$$



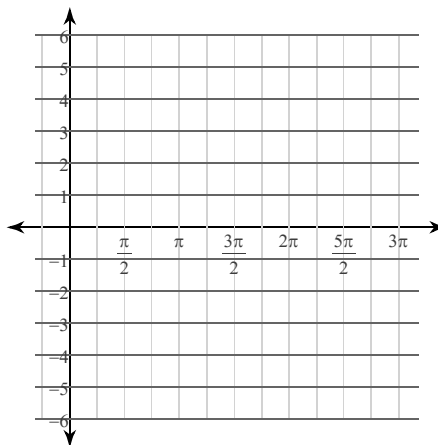
$$22) y = \cot\left(\theta - \frac{7\pi}{6}\right) - 2$$



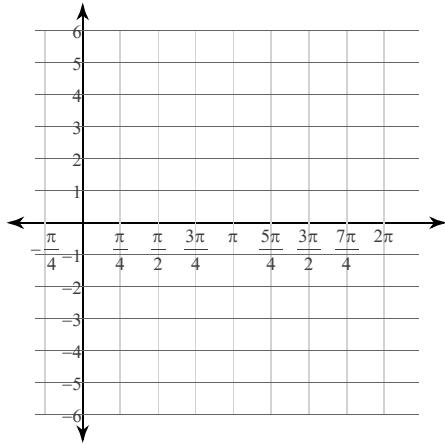
$$23) y = \sec\left(\theta + \frac{\pi}{3}\right) + 2$$



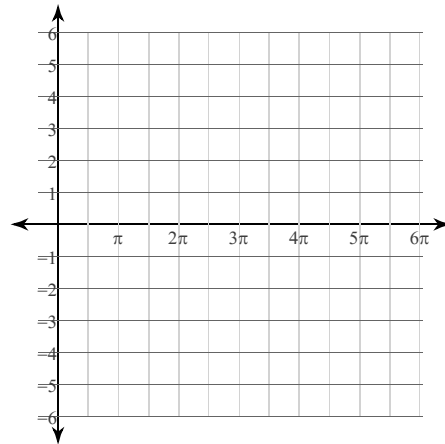
$$24) y = -1 + \sin\left(\theta + \frac{\pi}{4}\right)$$



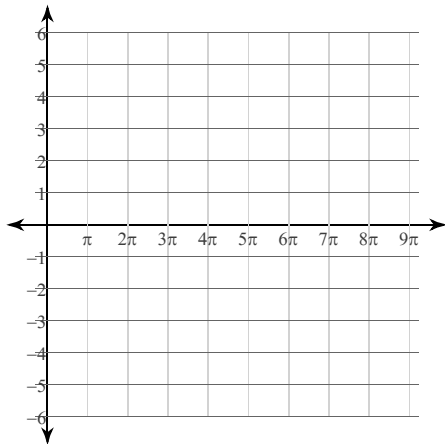
25) $y = 4\cos 2\theta - 2$



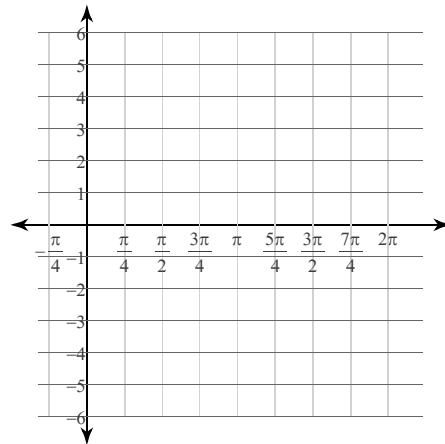
26) $y = \frac{1}{2} \cdot \sec \frac{\theta}{2} + 1$



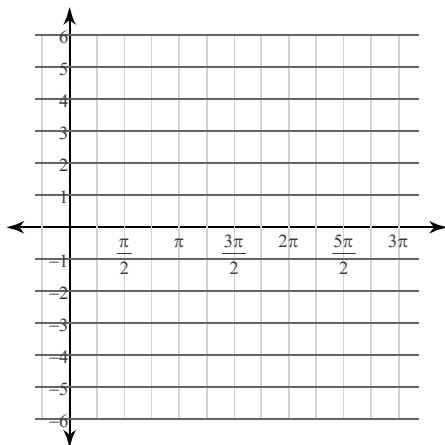
27) $y = 1 + 3\csc \frac{\theta}{3}$



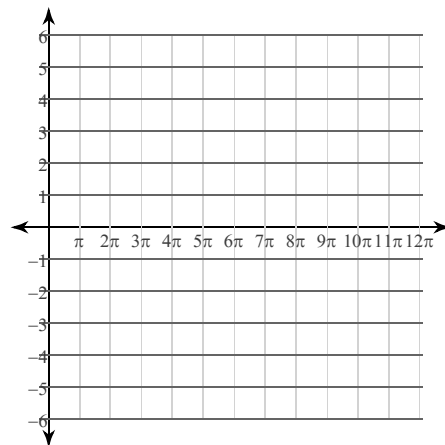
28) $y = \frac{1}{2} \cdot \sin 3\theta - 1$



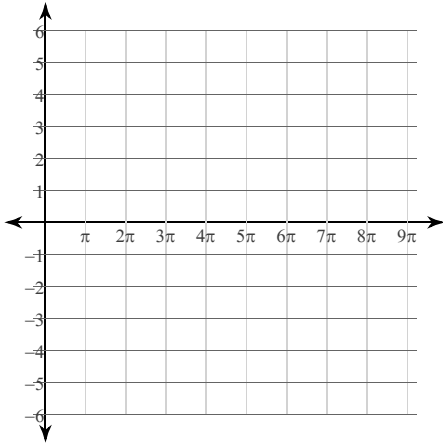
29) $y = \tan \frac{\theta}{2} + 1$



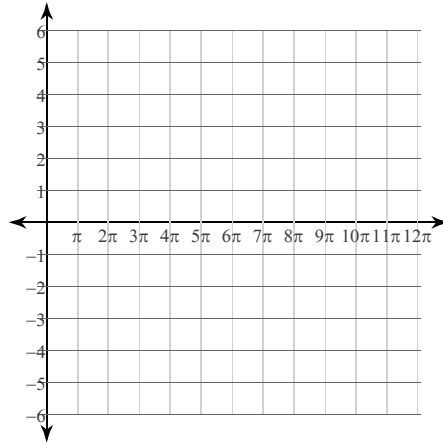
30) $y = \frac{1}{2} \cdot \cos \frac{\theta}{4} + 1$



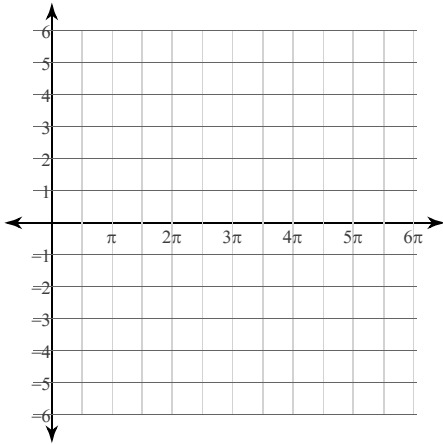
$$31) y = \csc \frac{\theta}{3} - 1$$



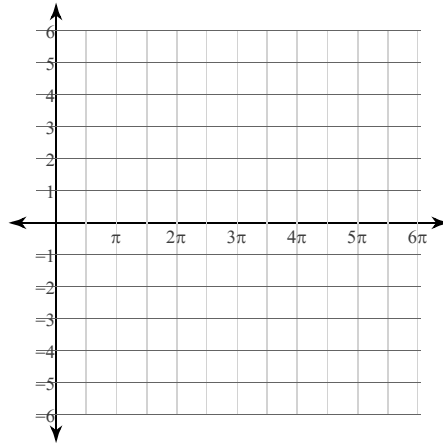
$$32) y = -1 + 4\sin \frac{\theta}{4}$$



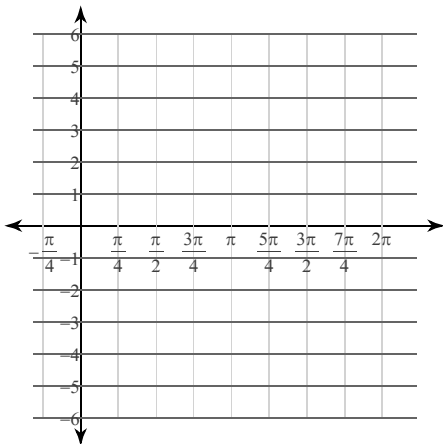
$$33) y = \frac{1}{2} \cdot \csc \frac{\theta}{2} - 1$$



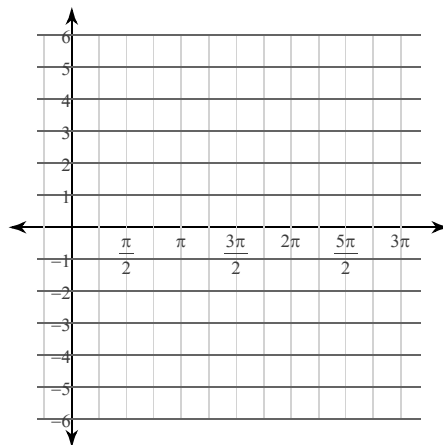
$$34) y = -2 + \frac{1}{2} \cdot \sec \frac{\theta}{2}$$



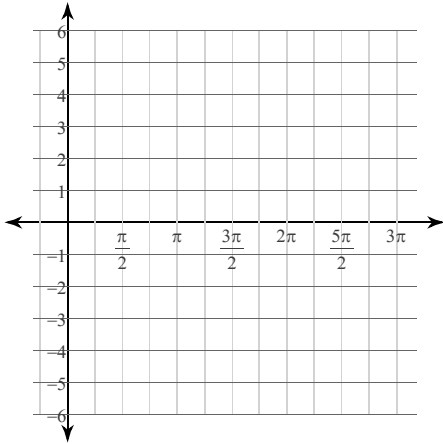
$$35) y = 3\csc 2\theta - 2$$



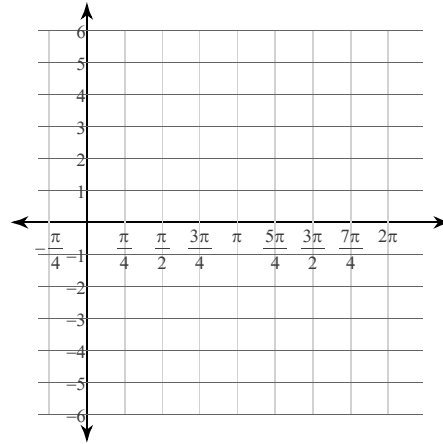
$$36) y = -2 + 4\tan \frac{\theta}{2}$$



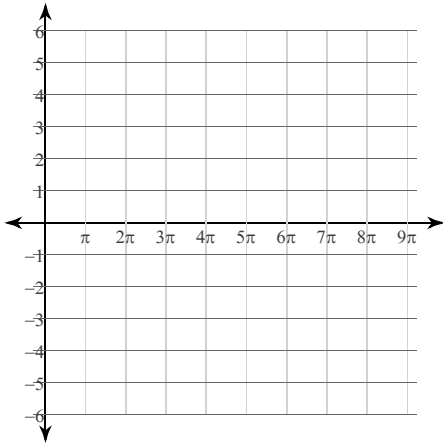
$$37) y = \csc\left(\theta - \frac{2\pi}{3}\right)$$



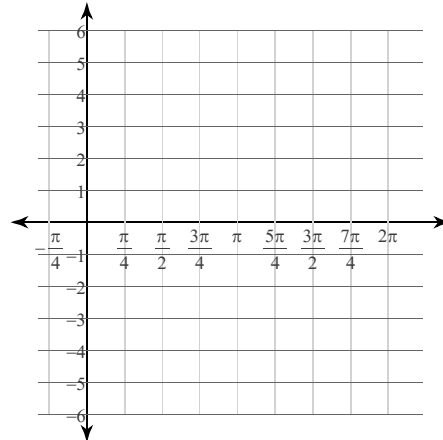
$$38) y = 3\sin\left(3\theta - \frac{\pi}{2}\right) + 2$$



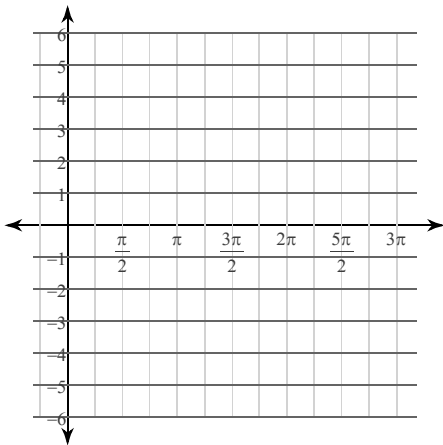
$$39) y = 4\cos\left(\frac{\theta}{3} + \frac{\pi}{6}\right) + 2$$



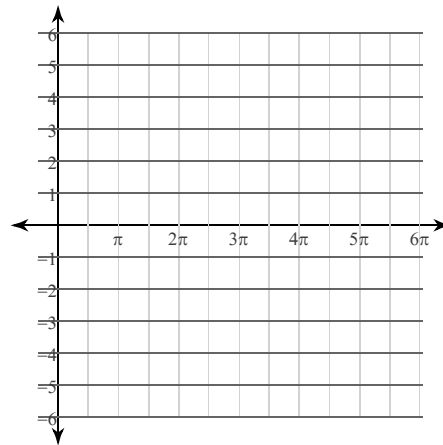
$$40) y = 2\cot\theta + 2$$



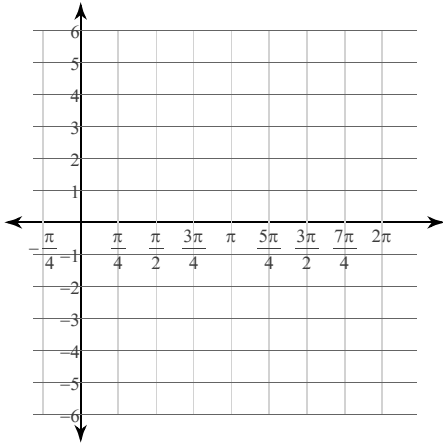
$$41) y = \tan\frac{\theta}{2} - 1$$



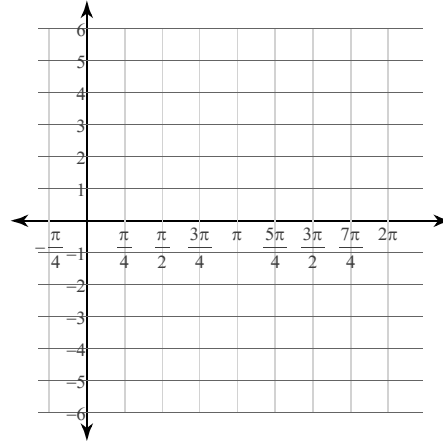
$$42) y = \sec\frac{\theta}{2} + 2$$



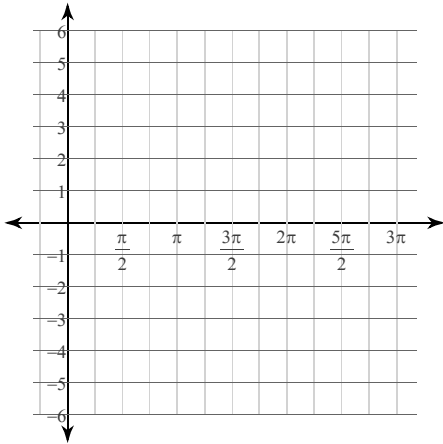
$$43) y = 4\cos\left(2\theta + \frac{5\pi}{3}\right) - 1$$



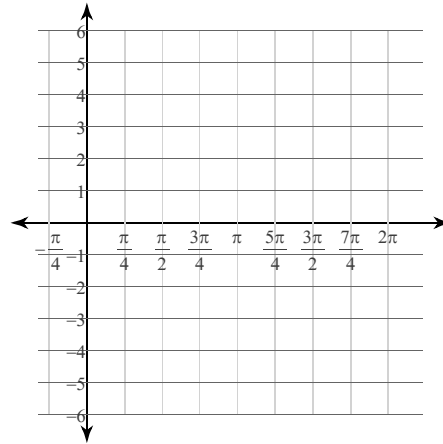
$$44) y = 2\tan \theta$$



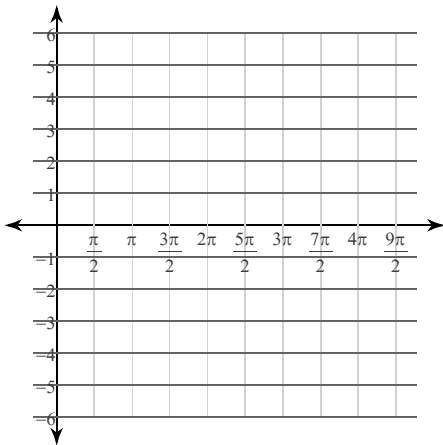
$$45) y = \frac{1}{2} \cdot \tan\left(\frac{\theta}{2} - \frac{\pi}{6}\right) - 1$$



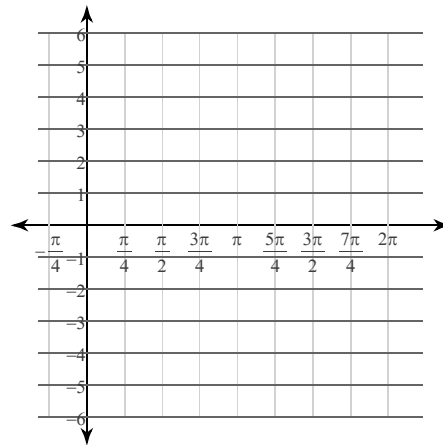
$$46) y = 2\sin\left(4\theta + \frac{\pi}{3}\right) + 1$$



$$47) y = \frac{1}{2} \cdot \tan\left(\frac{\theta}{3} - \frac{11\pi}{6}\right) - 1$$



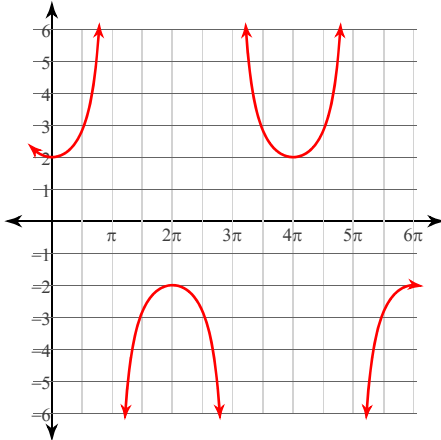
$$48) y = \sin\left(3\theta - \frac{2\pi}{3}\right) + 2$$



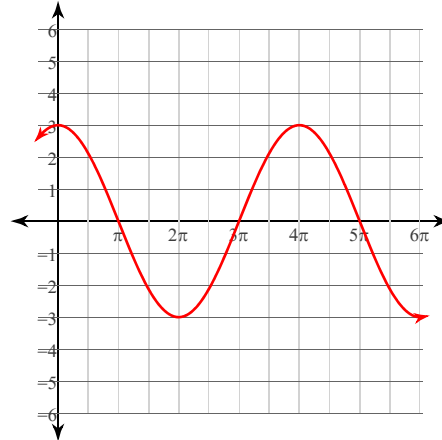
Sinusoidal Transformations

Graph each function using radians.

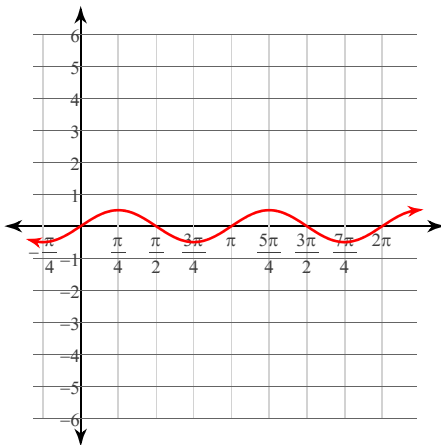
1) $y = 2\sec \frac{\theta}{2}$



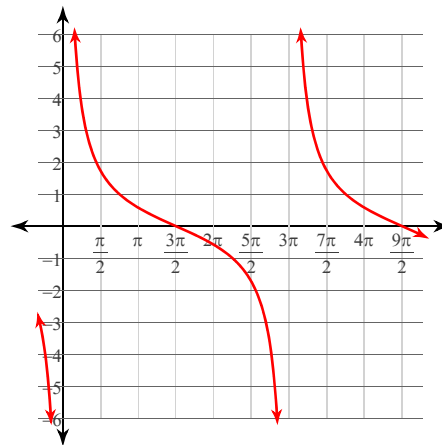
2) $y = 3\cos \frac{\theta}{2}$



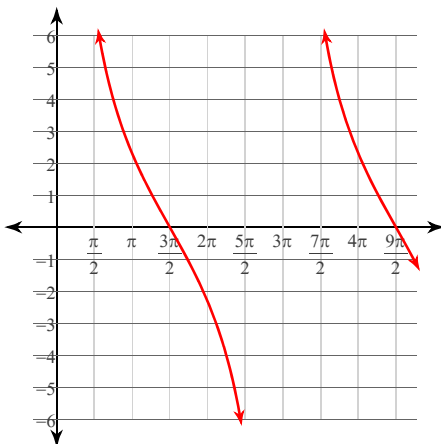
3) $y = \frac{1}{2} \cdot \sin 2\theta$



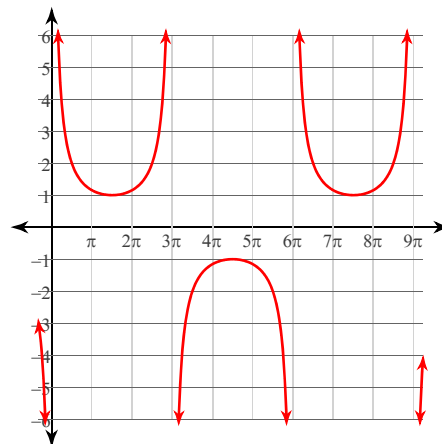
4) $y = \cot \frac{\theta}{3}$



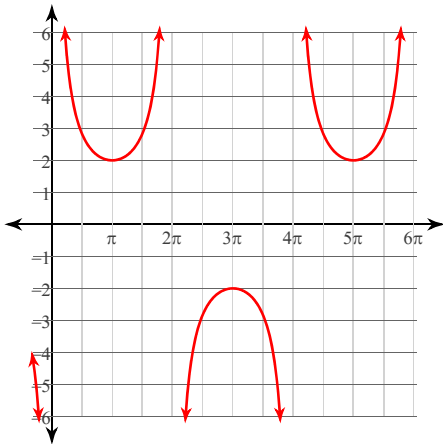
5) $y = 4\cot \frac{\theta}{3}$



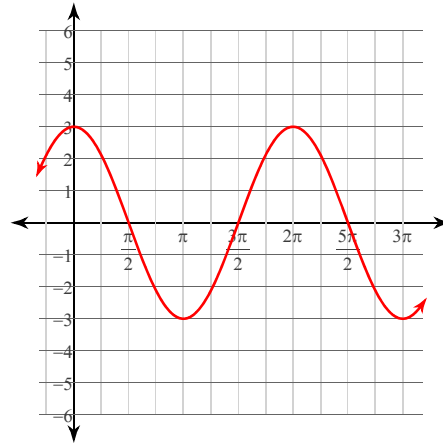
6) $y = \csc \frac{\theta}{3}$



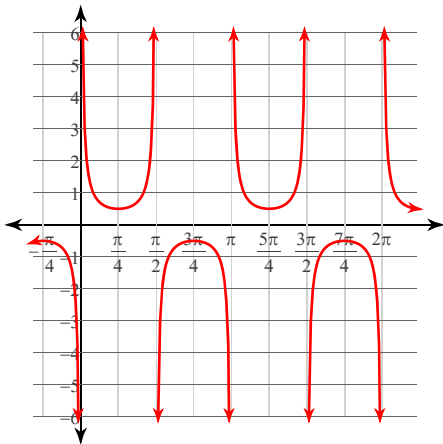
7) $y = 2\csc \frac{\theta}{2}$



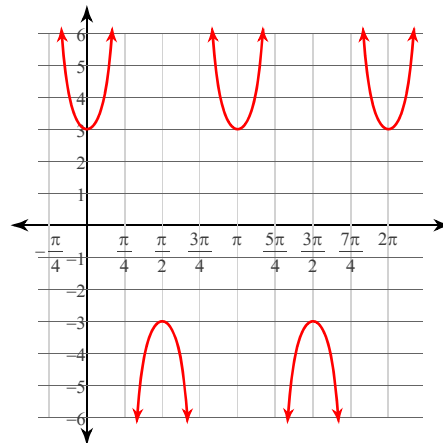
8) $y = 3\cos \theta$



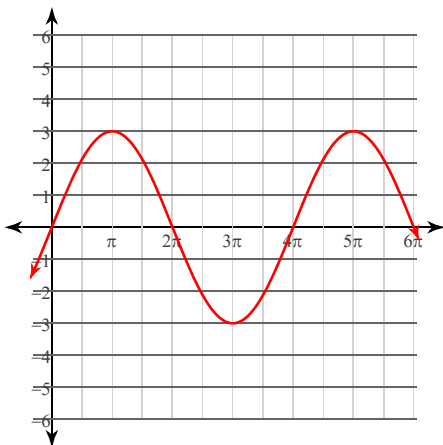
9) $y = \frac{1}{2} \cdot \csc 2\theta$



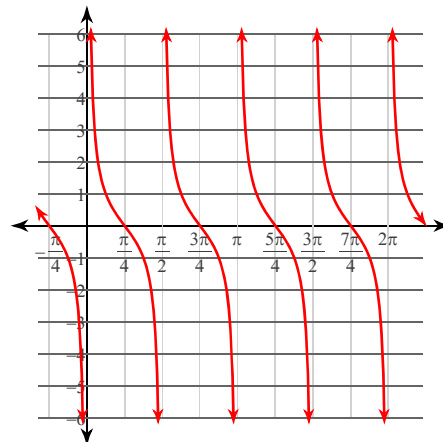
10) $y = 3\sec 2\theta$



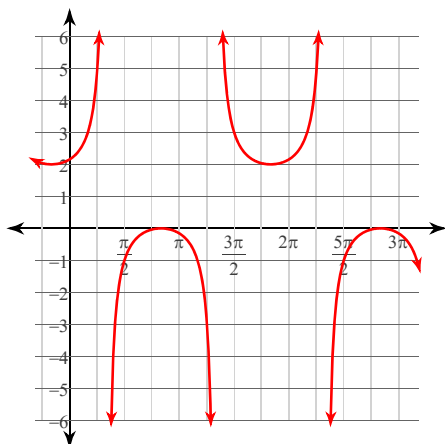
11) $y = 3\sin \frac{\theta}{2}$



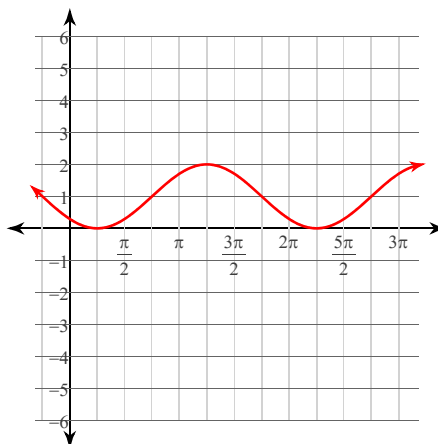
12) $y = \cot 2\theta$



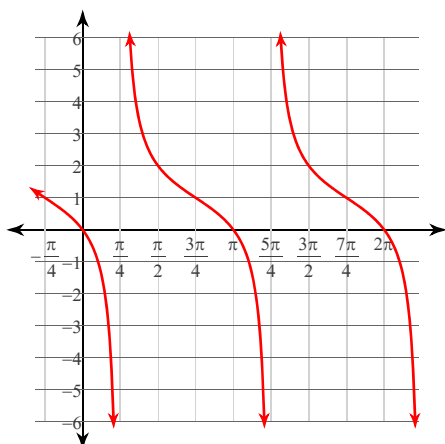
$$13) y = \sec\left(\theta + \frac{\pi}{6}\right) + 1$$



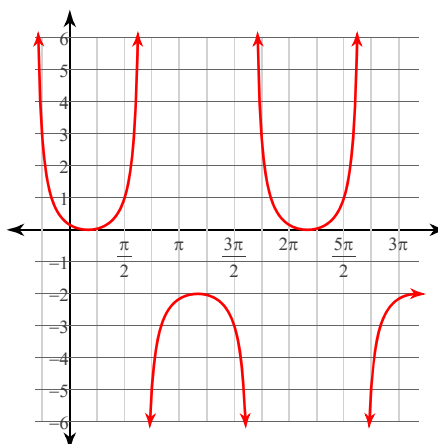
$$14) y = \sin\left(\theta - \frac{3\pi}{4}\right) + 1$$



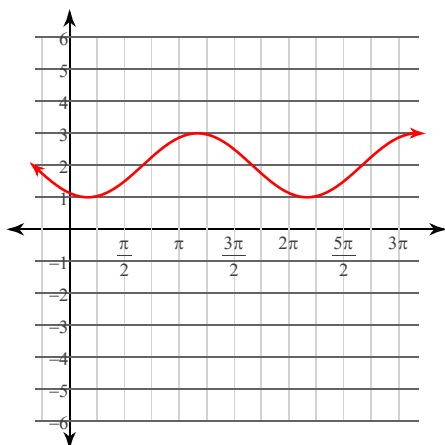
$$15) y = 1 + \cot\left(\theta + \frac{3\pi}{4}\right)$$



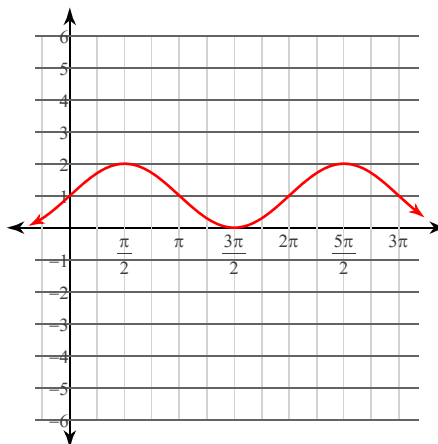
$$16) y = \sec\left(\theta - \frac{\pi}{6}\right) - 1$$



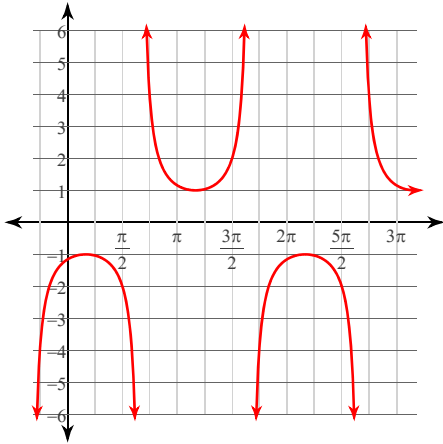
$$17) y = \sin\left(\theta - \frac{2\pi}{3}\right) + 2$$



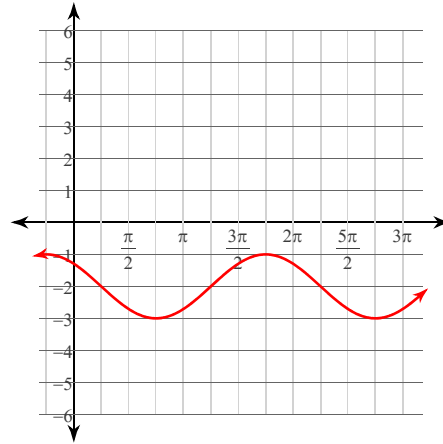
$$18) y = 1 + \sin \theta$$



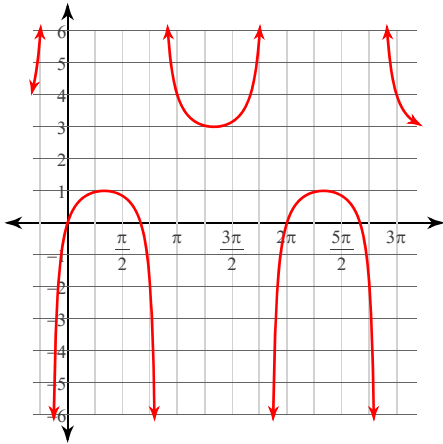
$$19) y = \sec\left(\theta + \frac{5\pi}{6}\right)$$



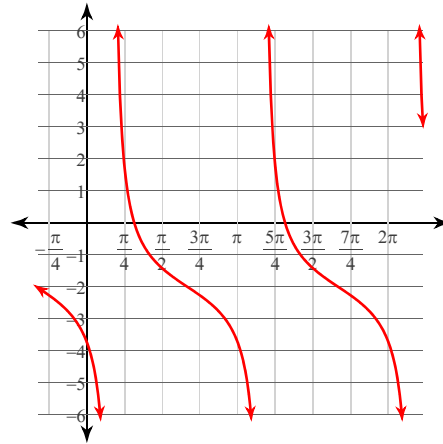
$$20) y = \cos\left(\theta + \frac{\pi}{4}\right) - 2$$



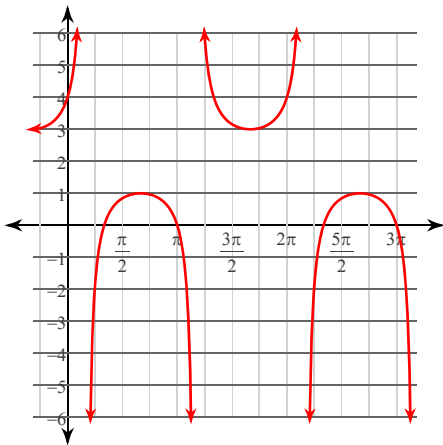
$$21) y = \csc\left(\theta - \frac{5\pi}{6}\right) + 2$$



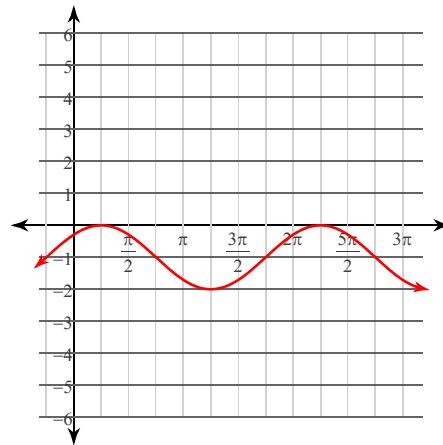
$$22) y = \cot\left(\theta - \frac{7\pi}{6}\right) - 2$$



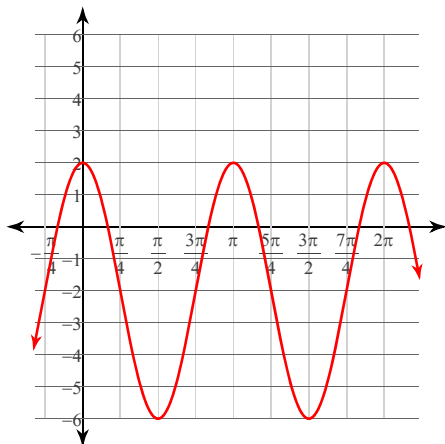
$$23) y = \sec\left(\theta + \frac{\pi}{3}\right) + 2$$



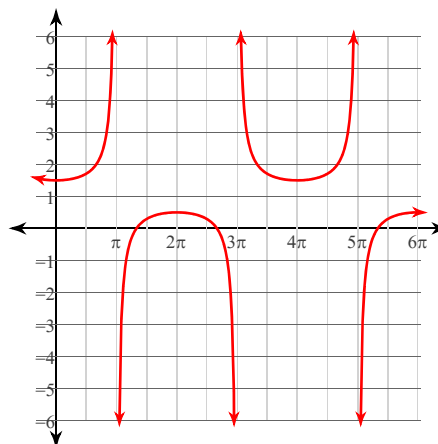
$$24) y = -1 + \sin\left(\theta + \frac{\pi}{4}\right)$$



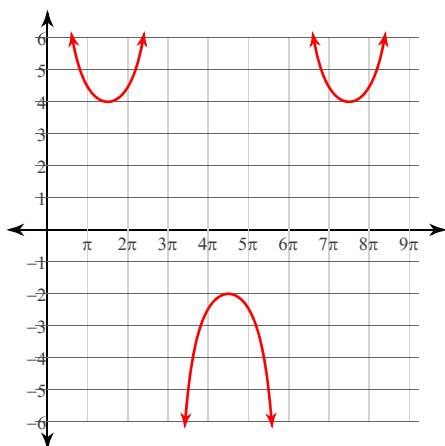
25) $y = 4\cos 2\theta - 2$



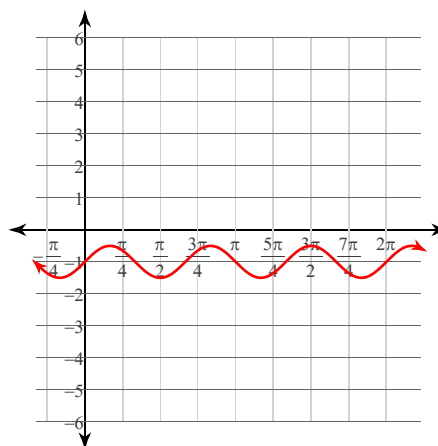
26) $y = \frac{1}{2} \cdot \sec \frac{\theta}{2} + 1$



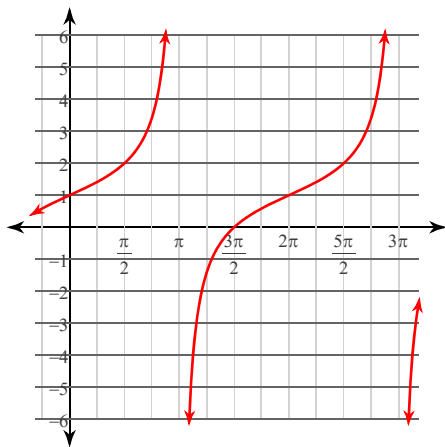
27) $y = 1 + 3\csc \frac{\theta}{3}$



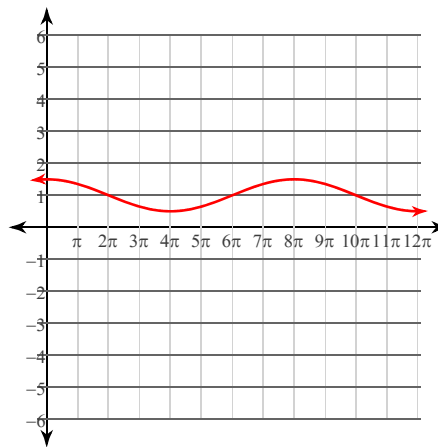
28) $y = \frac{1}{2} \cdot \sin 3\theta - 1$



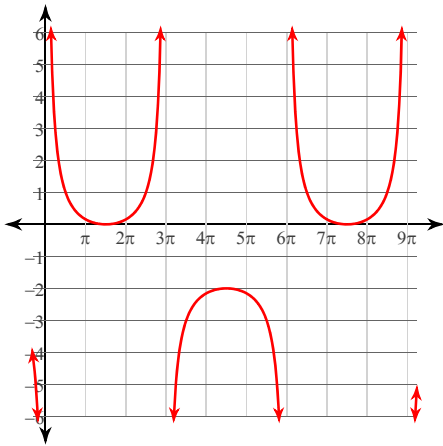
29) $y = \tan \frac{\theta}{2} + 1$



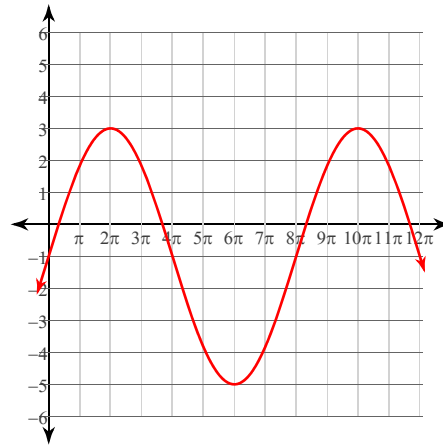
30) $y = \frac{1}{2} \cdot \cos \frac{\theta}{4} + 1$



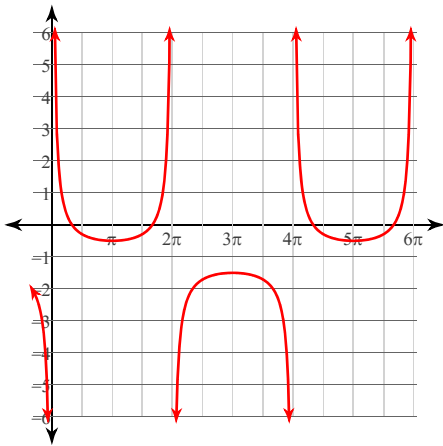
$$31) y = \csc \frac{\theta}{3} - 1$$



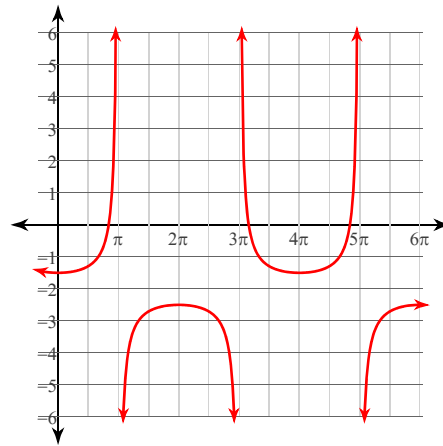
$$32) y = -1 + 4\sin \frac{\theta}{4}$$



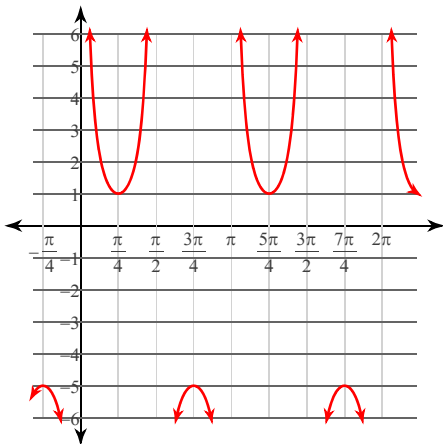
$$33) y = \frac{1}{2} \cdot \csc \frac{\theta}{2} - 1$$



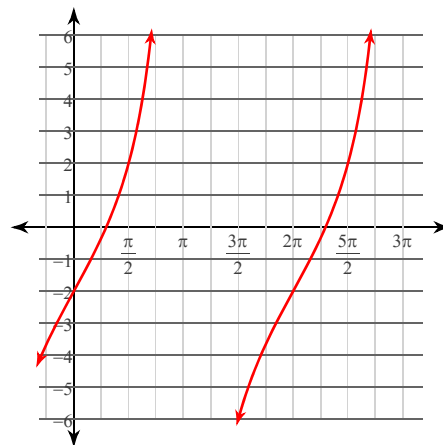
$$34) y = -2 + \frac{1}{2} \cdot \sec \frac{\theta}{2}$$



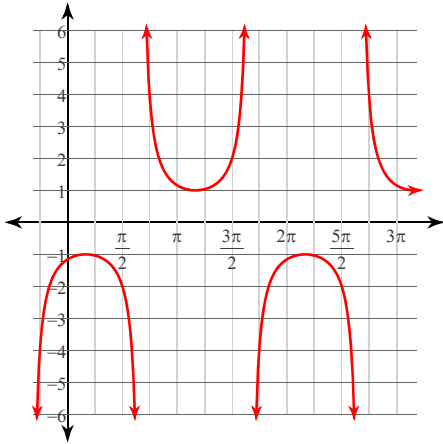
$$35) y = 3\csc 2\theta - 2$$



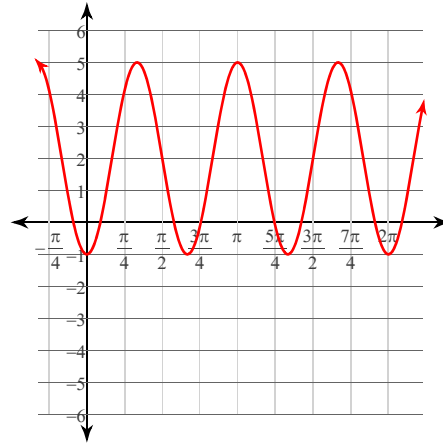
$$36) y = -2 + 4\tan \frac{\theta}{2}$$



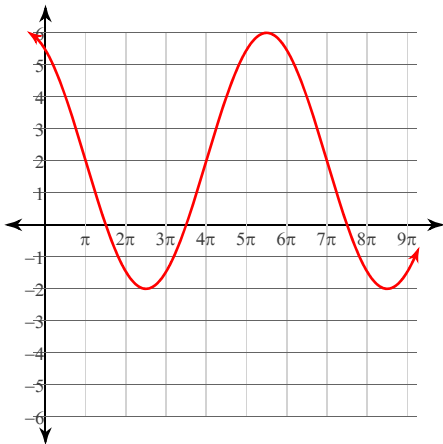
$$37) y = \csc\left(\theta - \frac{2\pi}{3}\right)$$



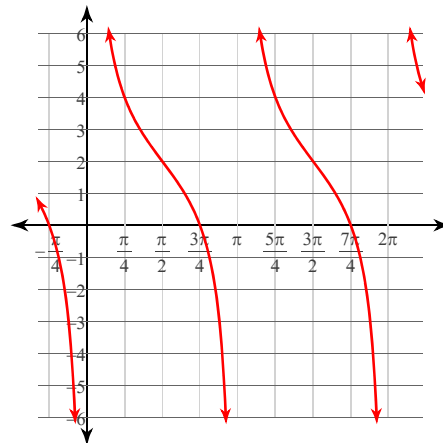
$$38) y = 3\sin\left(3\theta - \frac{\pi}{2}\right) + 2$$



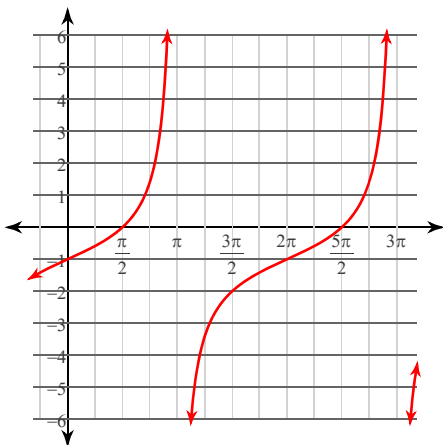
$$39) y = 4\cos\left(\frac{\theta}{3} + \frac{\pi}{6}\right) + 2$$



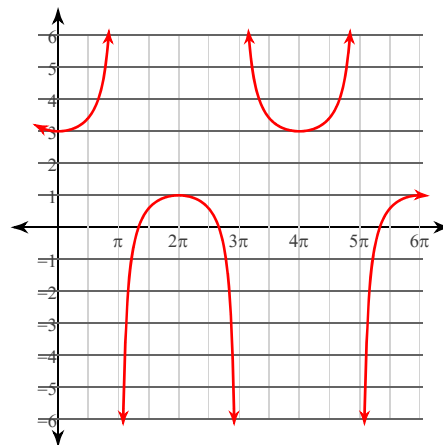
$$40) y = 2\cot\theta + 2$$



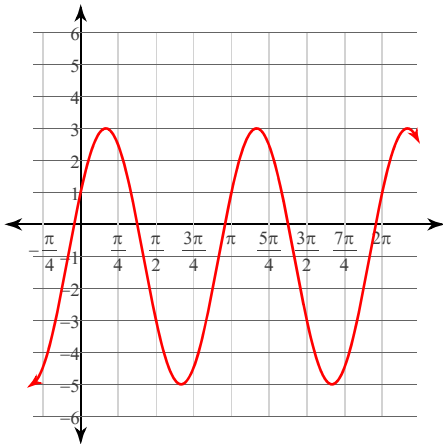
$$41) y = \tan\frac{\theta}{2} - 1$$



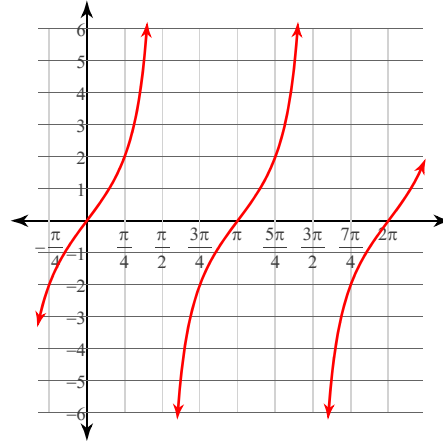
$$42) y = \sec\frac{\theta}{2} + 2$$



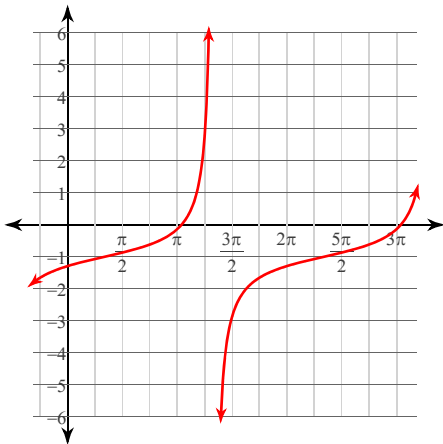
$$43) y = 4\cos\left(2\theta + \frac{5\pi}{3}\right) - 1$$



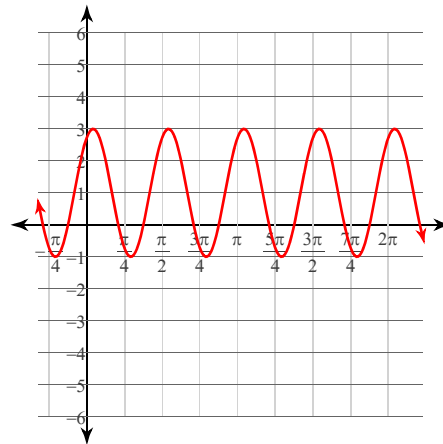
$$44) y = 2\tan \theta$$



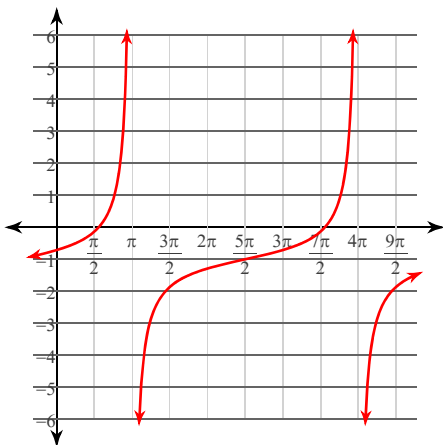
$$45) y = \frac{1}{2} \cdot \tan\left(\frac{\theta}{2} - \frac{\pi}{6}\right) - 1$$



$$46) y = 2\sin\left(4\theta + \frac{\pi}{3}\right) + 1$$



$$47) y = \frac{1}{2} \cdot \tan\left(\frac{\theta}{3} - \frac{11\pi}{6}\right) - 1$$



$$48) y = \sin\left(3\theta - \frac{2\pi}{3}\right) + 2$$

