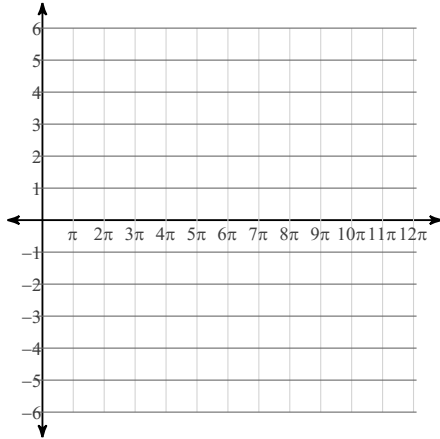


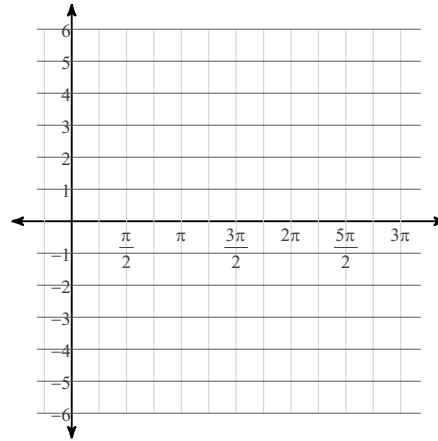
More graphing practice

Find the amplitude (for every function except tan and cot) and the period in radians. Then sketch the graph using radians.

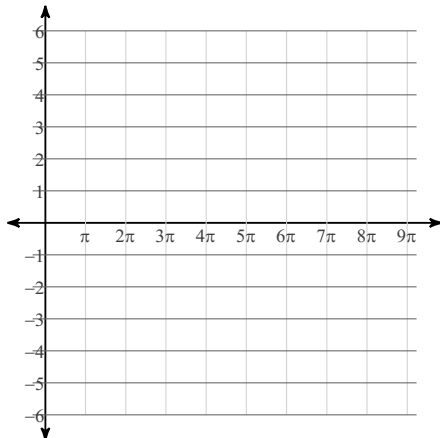
1) $y = \cos \frac{\theta}{4}$



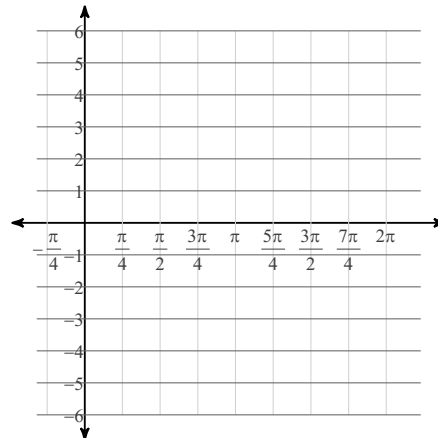
2) $y = \frac{1}{2} \cdot \sin \theta$



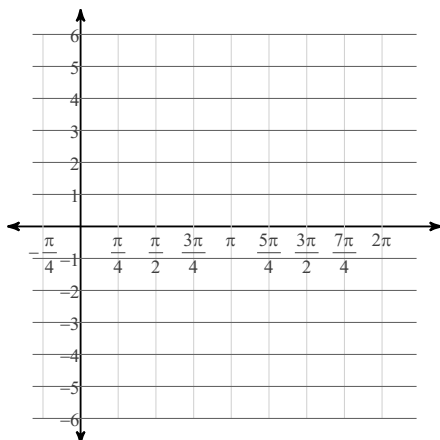
3) $y = 3 \csc \frac{\theta}{3}$



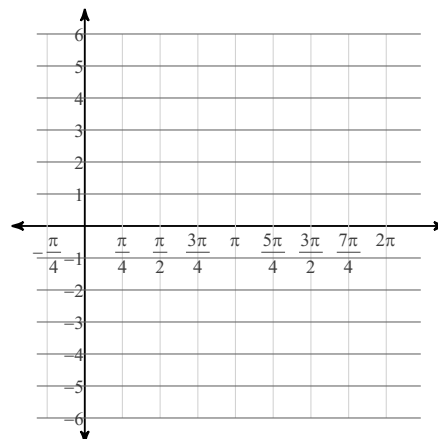
4) $y = \frac{1}{2} \cdot \tan 2\theta$



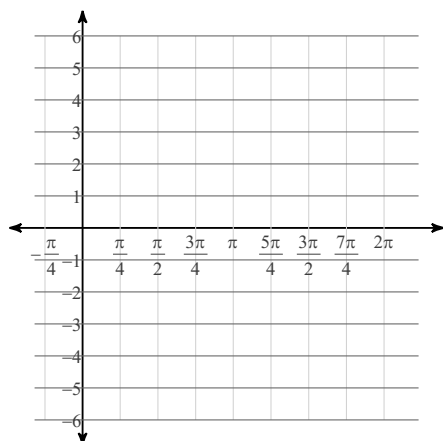
5) $y = \frac{1}{2} \cdot \csc 2\theta$



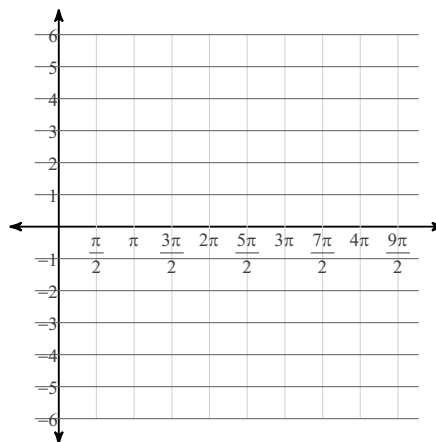
6) $y = 2 \cos 2\theta$



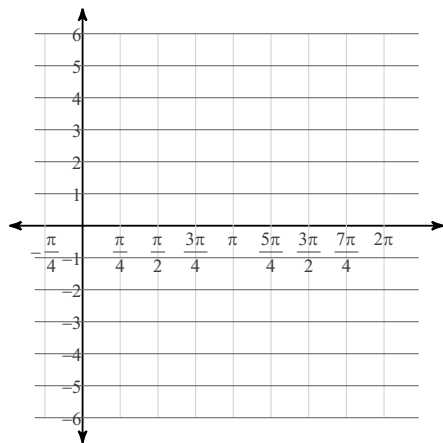
$$7) y = \frac{1}{2} \cdot \sin 3\theta$$



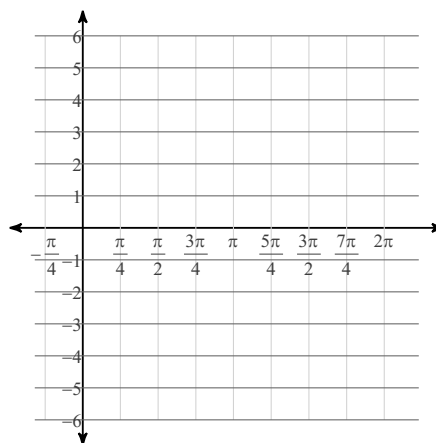
$$8) y = 4 \tan \frac{\theta}{3}$$



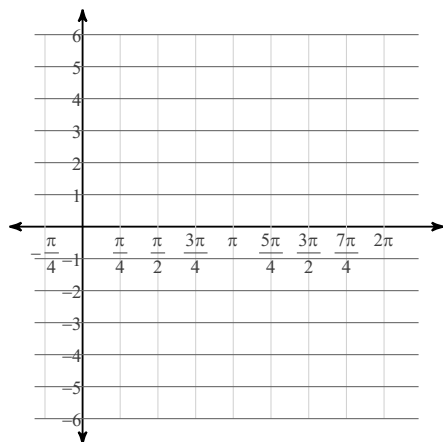
$$9) y = 2 \csc 2\theta$$



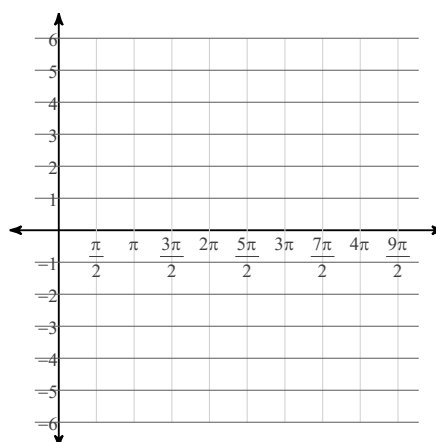
$$10) y = 4 \sin 2\theta$$



$$11) y = 2 \tan 2\theta$$

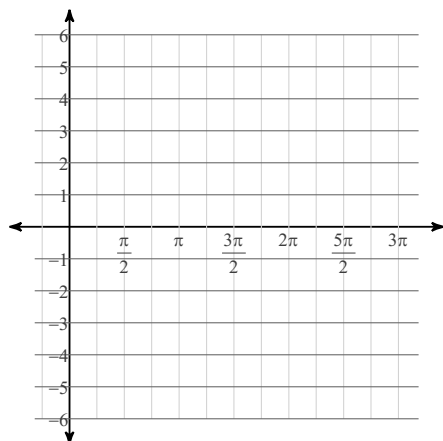


$$12) y = \tan \frac{\theta}{3}$$

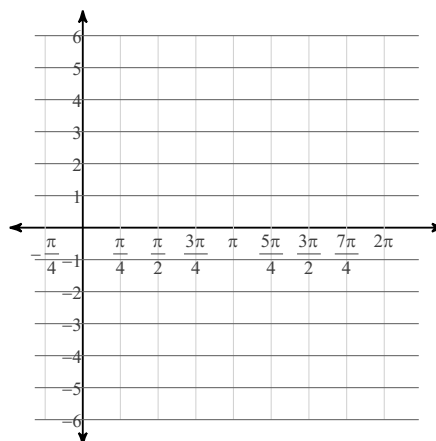


Find the phase shift (horizontal shift) in radians and the vertical shift. Then sketch the graph using radians.

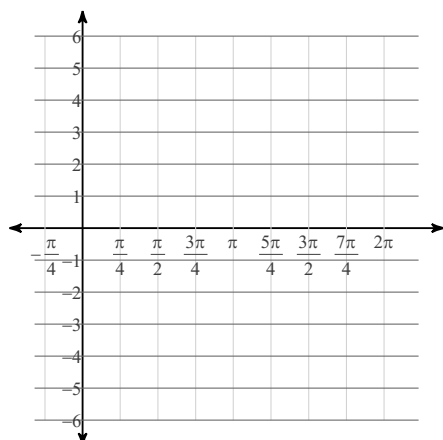
13) $y = \sin \theta + 1$



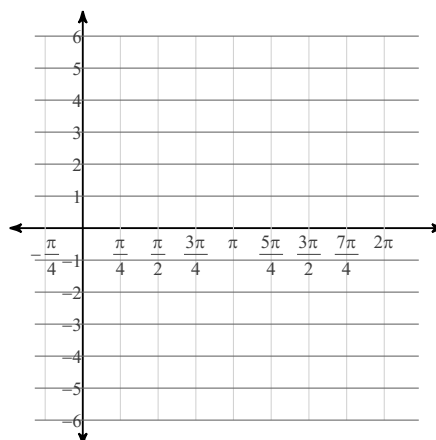
14) $y = \tan \left(\theta + \frac{2\pi}{3} \right)$



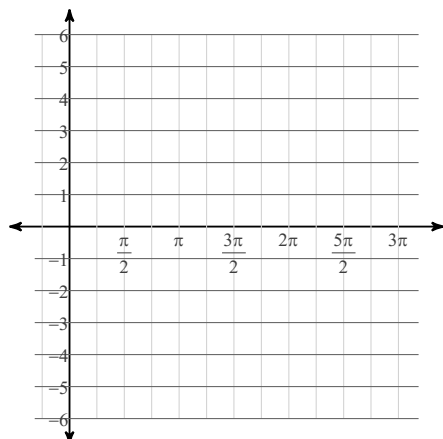
15) $y = \tan \left(\theta + \frac{\pi}{3} \right)$



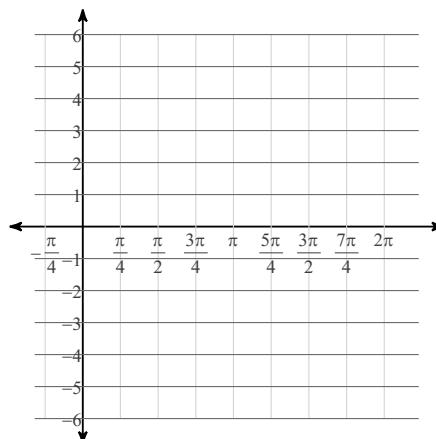
16) $y = \cot \left(\theta - \frac{2\pi}{3} \right) + 1$



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

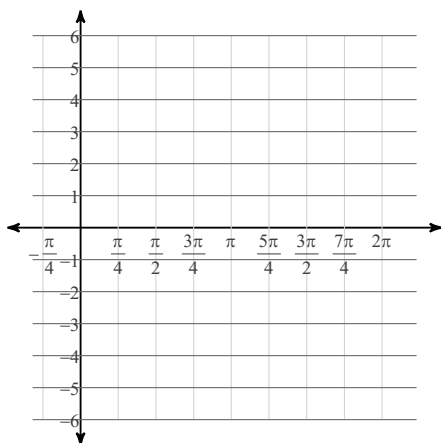


18) $y = -2 + \cot \left(\theta - \frac{\pi}{4} \right)$

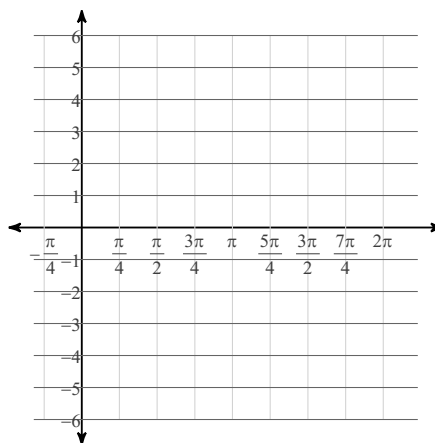


Find the amplitude, the period in radians, the phase shift in radians, and the vertical shift. Then sketch the graph using radians.

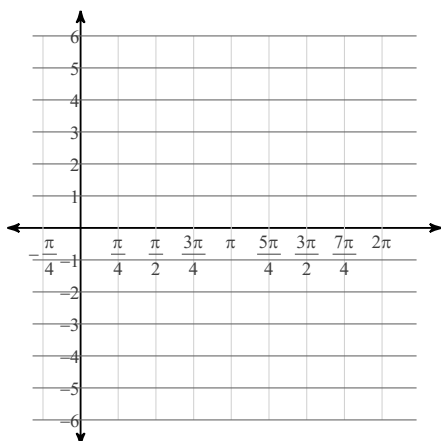
$$19) y = \frac{1}{2} \cdot \cos\left(3\theta + \frac{\pi}{2}\right) + 1$$



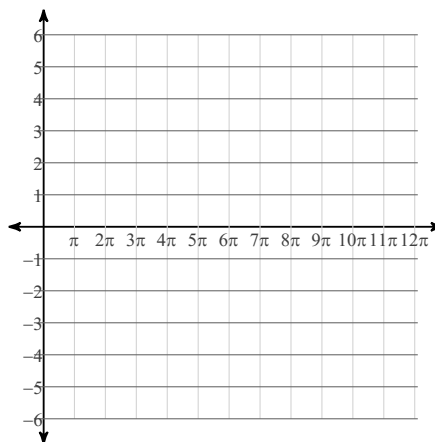
$$20) y = 4\sin\left(4\theta - \frac{\pi}{3}\right) + 1$$



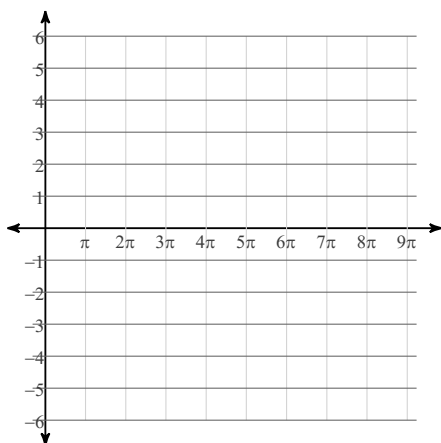
$$21) y = -2 + \frac{1}{2} \cdot \sin\left(4\theta - \frac{\pi}{2}\right)$$



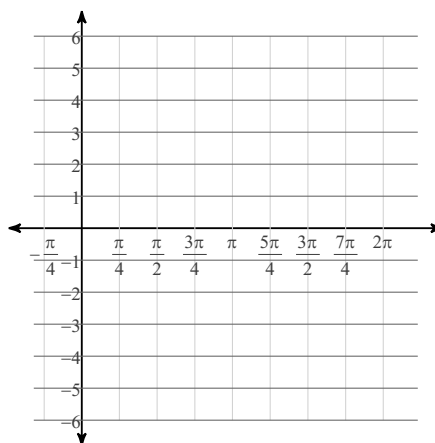
$$22) y = 4\cos\left(\frac{\theta}{4} + \frac{\pi}{4}\right) - 1$$



$$23) y = 1 + \frac{1}{2} \cdot \sin\left(\frac{\theta}{3} - \frac{\pi}{4}\right)$$

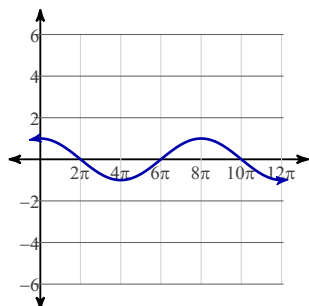


$$24) y = 2 + \frac{1}{2} \cdot \cos\left(3\theta - \frac{\pi}{3}\right)$$



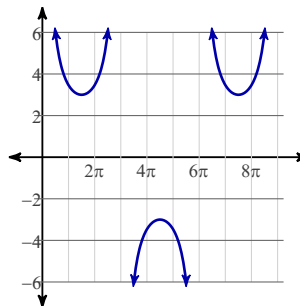
Answers to More graphing practice (ID: 1)

1)



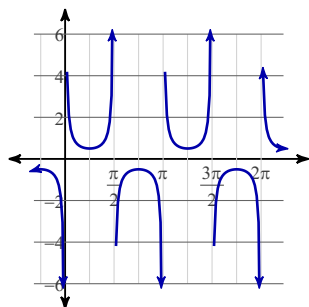
Amplitude: 1
Period: 8π

3)



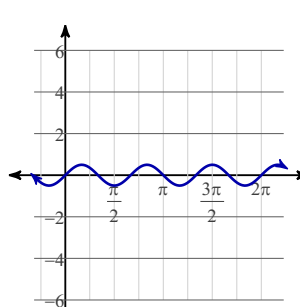
Amplitude: None
Period: 6π

5)



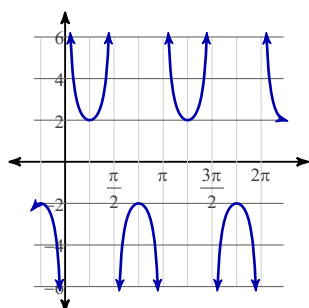
Amplitude: None
Period: π

7)



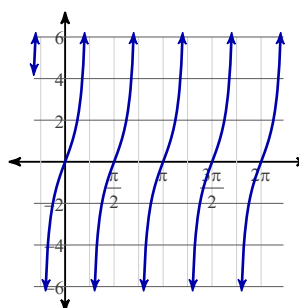
Amplitude: $\frac{1}{2}$
Period: $\frac{2\pi}{3}$

9)



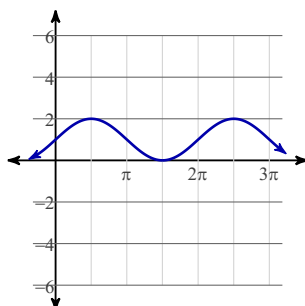
Amplitude: None
Period: π

11)



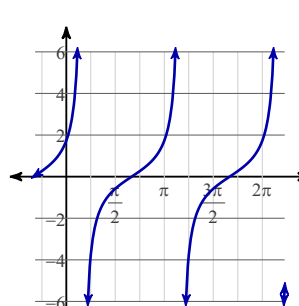
Amplitude: None
Period: $\frac{\pi}{2}$

13)



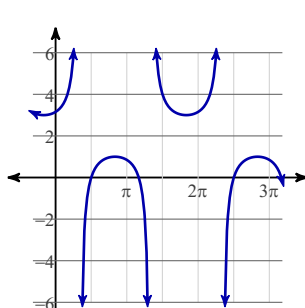
Phase shift: None
Vert. shift: Up 1

15)



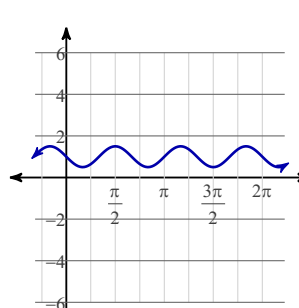
Phase shift: Left $\frac{\pi}{3}$
Vert. shift: None

17)



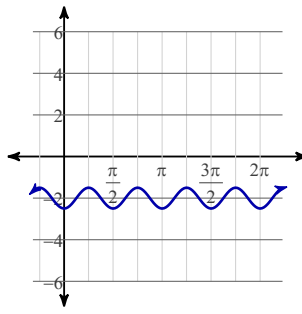
Phase shift: Left $\frac{\pi}{6}$
Vert. shift: Up 2

19)



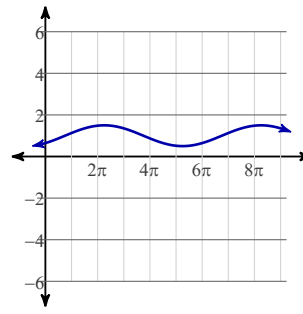
Amplitude: $\frac{1}{2}$
Period: $\frac{2\pi}{3}$
Phase shift: Left $\frac{\pi}{6}$
Vert. shift: Up 1

21)



Amplitude: $\frac{1}{2}$
Period: $\frac{\pi}{2}$
Phase shift: Right $\frac{\pi}{8}$
Vert. shift: Down 2

23)



Amplitude: $\frac{1}{2}$
Period: 6π
Phase shift: Right $\frac{3\pi}{4}$
Vert. shift: Up 1