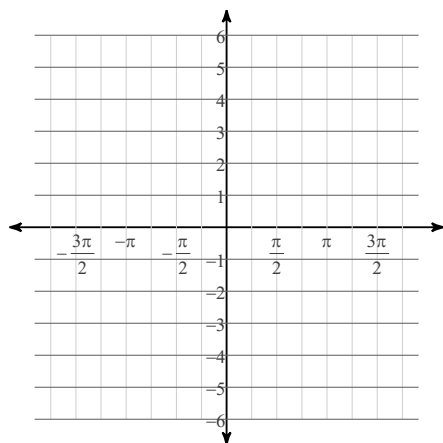


Assignment

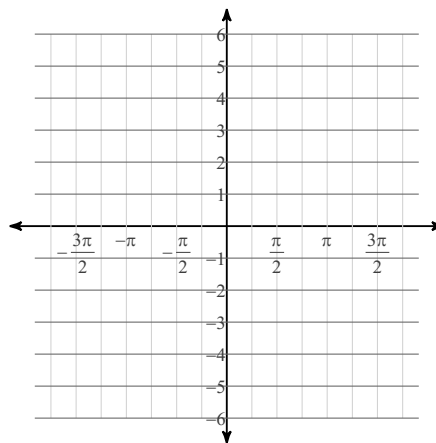
Date _____ Period _____

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

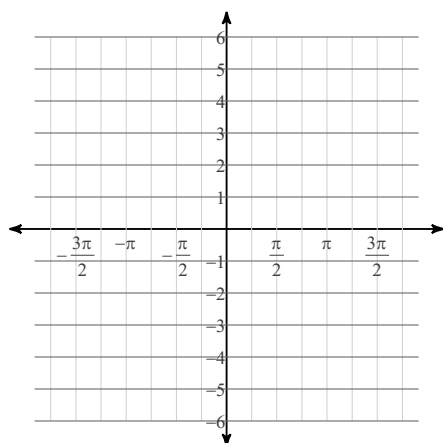
$$1) y = \frac{1}{2} \cdot \cos\left(\theta + \frac{\pi}{2}\right)$$



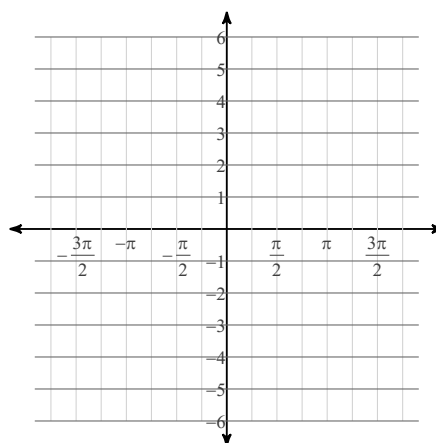
$$2) y = 3\sin\left(\theta - \frac{3\pi}{4}\right)$$



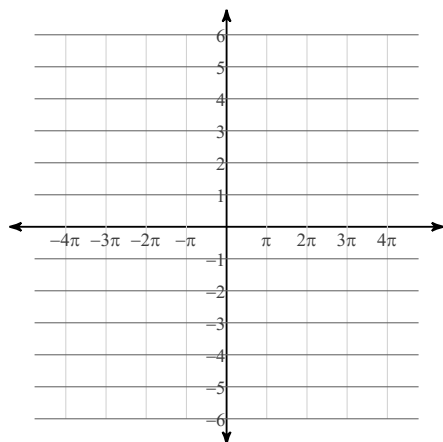
$$3) y = 2\sin \theta - 1$$



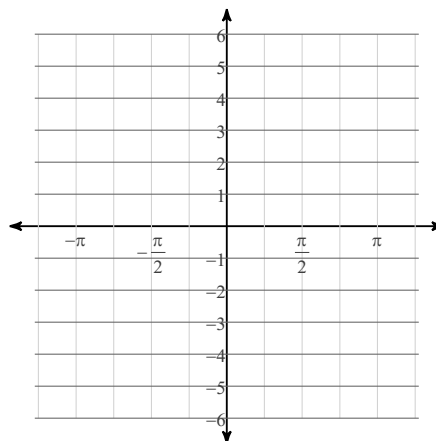
$$4) y = 4\sin \theta + 1$$



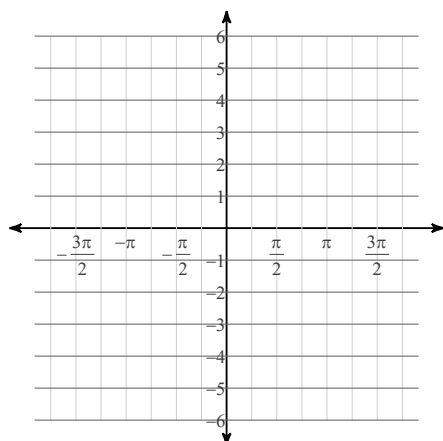
$$5) y = \cos \frac{\theta}{3}$$



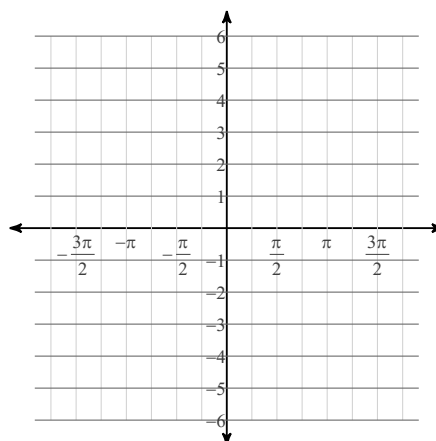
$$6) y = \cos 4\theta + 1$$



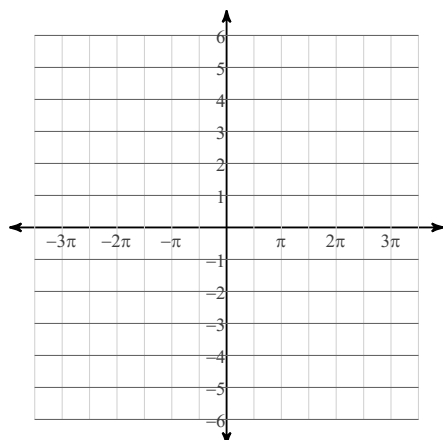
$$7) y = \sin\left(\theta - \frac{\pi}{4}\right) - 2$$



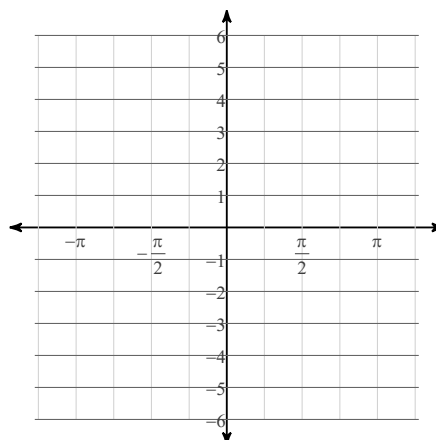
$$8) y = \cos\left(\theta - \frac{\pi}{2}\right) - 2$$



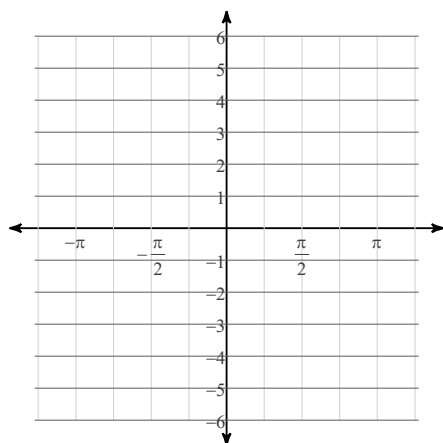
$$9) y = \sin\left(\frac{\theta}{2} + \frac{3\pi}{4}\right)$$



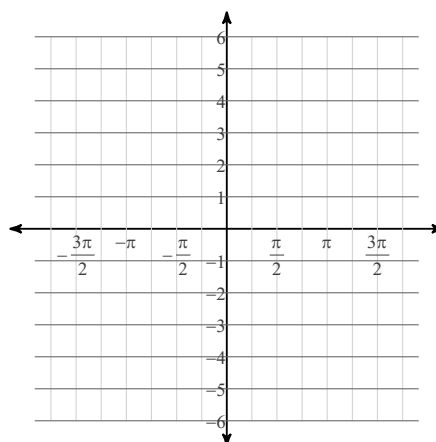
$$10) y = \sin\left(2\theta + \frac{\pi}{2}\right)$$



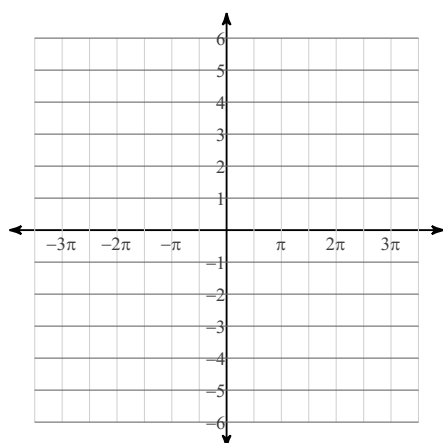
11) $y = \cos 2\theta - 1$



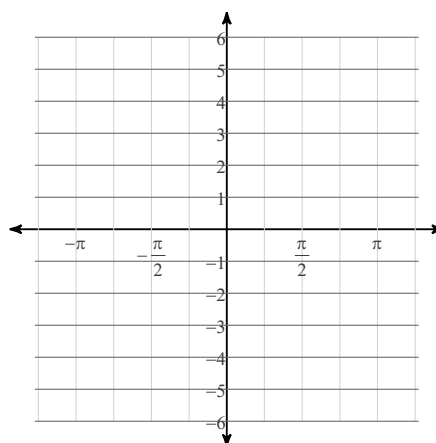
12) $y = \cos\left(\theta + \frac{\pi}{4}\right)$



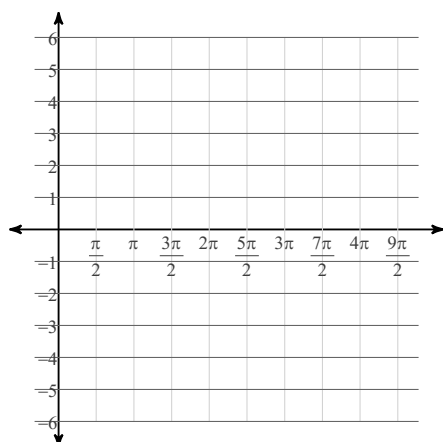
13) $y = \cos\left(\frac{\theta}{2} - \frac{\pi}{2}\right) + 1$



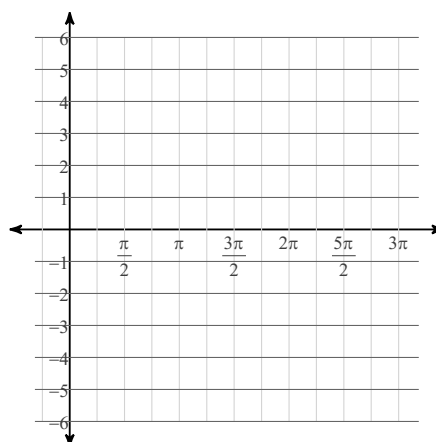
14) $y = \frac{1}{2} \cdot \sin 2\theta$



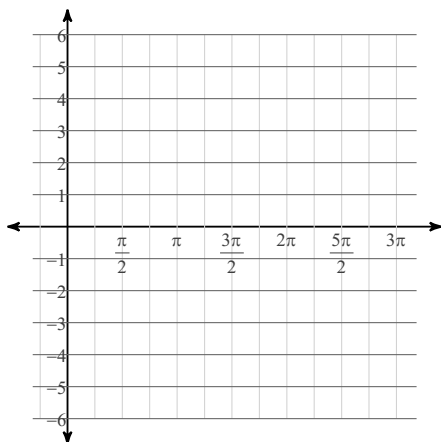
15) $y = \tan \frac{\theta}{3}$



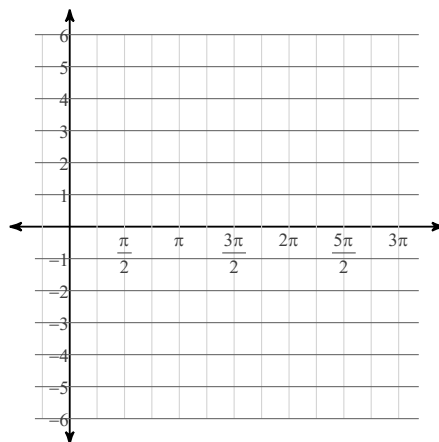
16) $y = \tan \frac{\theta}{2}$



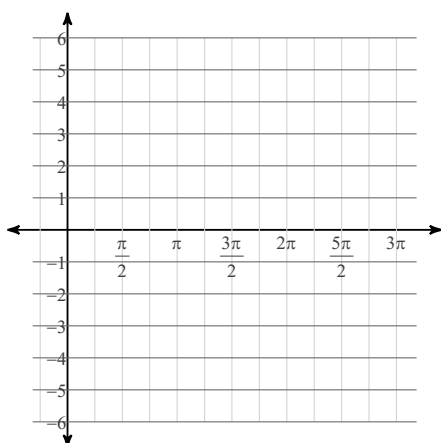
$$17) y = \tan \frac{\theta}{2} + 1$$



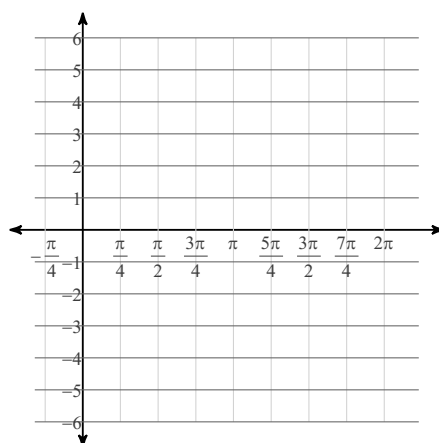
$$18) y = 2 + \tan \frac{\theta}{2}$$



$$19) y = \tan \left(\frac{\theta}{2} - \frac{\pi}{2} \right) - 2$$

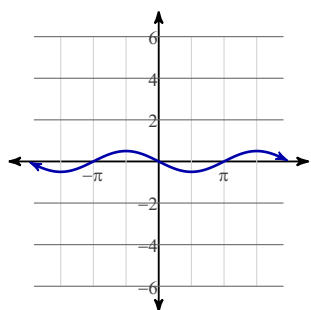


$$20) y = \tan \left(2\theta - \frac{\pi}{2} \right) - 1$$



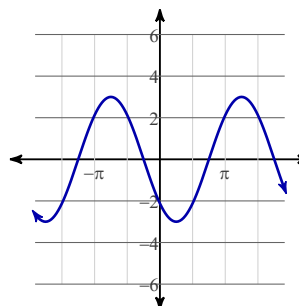
Answers to Assignment (ID: 1)

1)



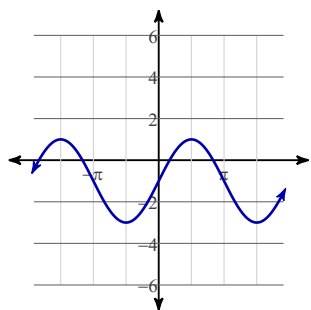
Amplitude: $\frac{1}{2}$
 Period: 2π
 Phase shift: Left $\frac{\pi}{2}$
 Vert. shift: None

2)



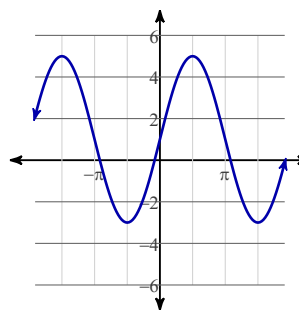
Amplitude: 3
 Period: 2π
 Phase shift: Right $\frac{3\pi}{4}$
 Vert. shift: None

3)



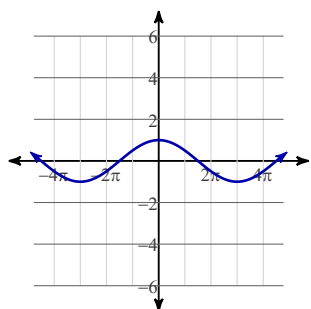
Amplitude: 2
 Period: 2π
 Phase shift: None
 Vert. shift: Down 1

4)



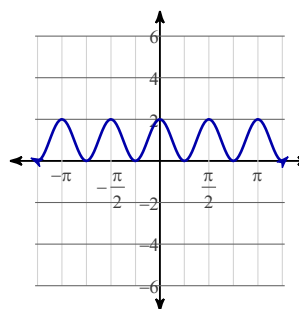
Amplitude: 4
 Period: 2π
 Phase shift: None
 Vert. shift: Up 1

5)



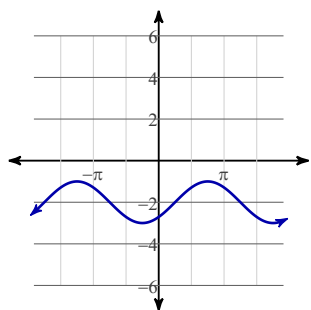
Amplitude: 1
 Period: 6π
 Phase shift: None
 Vert. shift: None

6)



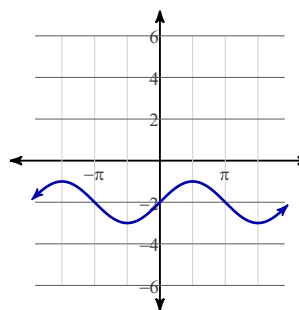
Amplitude: 1
 Period: $\frac{\pi}{2}$
 Phase shift: None
 Vert. shift: Up 1

7)



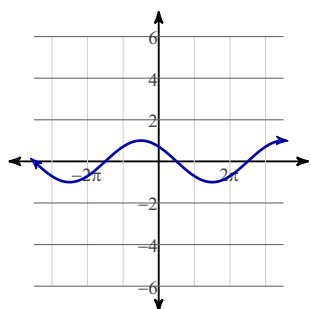
Amplitude: 1
 Period: 2π
 Phase shift: Right $\frac{\pi}{4}$
 Vert. shift: Down 2

8)



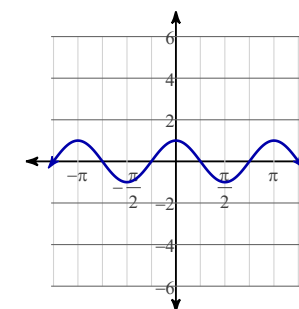
Amplitude: 1
 Period: 2π
 Phase shift: Right $\frac{\pi}{2}$
 Vert. shift: Down 2

9)



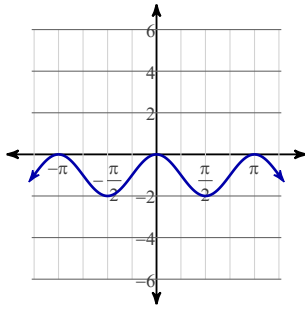
Amplitude: 1
 Period: 4π
 Phase shift: Left $\frac{3\pi}{2}$
 Vert. shift: None

10)



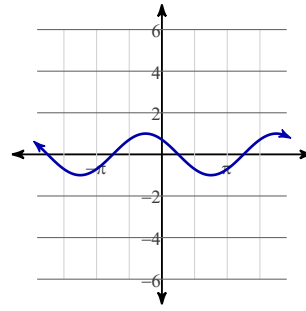
Amplitude: 1
 Period: π
 Phase shift: Left $\frac{\pi}{4}$
 Vert. shift: None

11)



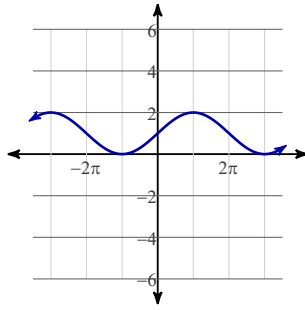
Amplitude: 1
 Period: π
 Phase shift: None
 Vert. shift: Down 1

12)



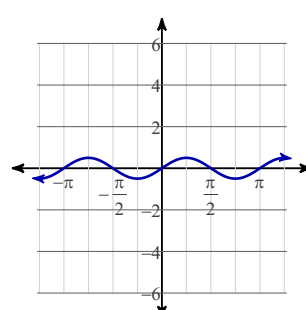
Amplitude: 1
 Period: 2π
 Phase shift: Left $\frac{\pi}{4}$
 Vert. shift: None

13)



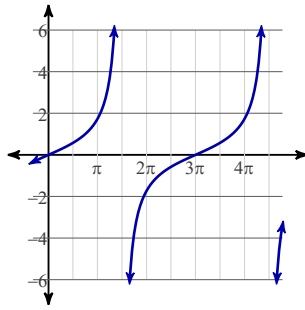
Amplitude: 1
 Period: 4π
 Phase shift: Right π
 Vert. shift: Up 1

14)



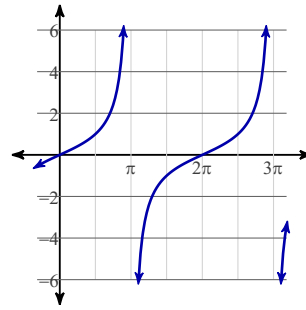
Amplitude: $\frac{1}{2}$
 Period: π
 Phase shift: None
 Vert. shift: None

15)



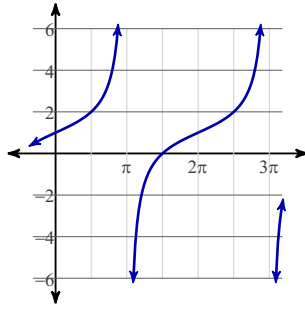
Amplitude: None
 Period: 3π
 Phase shift: None
 Vert. shift: None

16)



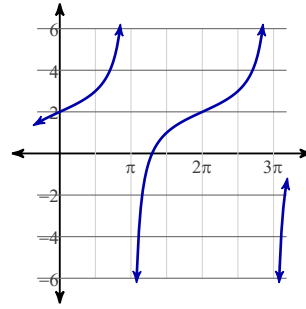
Amplitude: None
 Period: 2π
 Phase shift: None
 Vert. shift: None

17)



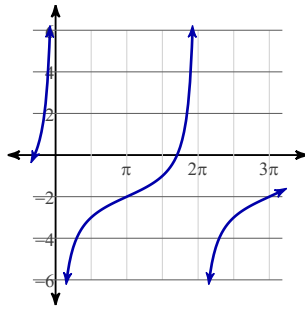
Amplitude: None
 Period: 2π
 Phase shift: None
 Vert. shift: Up 1

18)



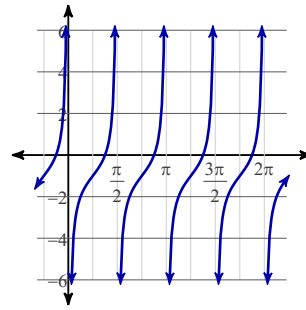
Amplitude: None
 Period: 2π
 Phase shift: None
 Vert. shift: Up 2

19)



Amplitude: None
 Period: 2π
 Phase shift: Right π
 Vert. shift: Down 2

20)



Amplitude: None
 Period: $\frac{\pi}{2}$
 Phase shift: Right $\frac{\pi}{4}$
 Vert. shift: Down 1