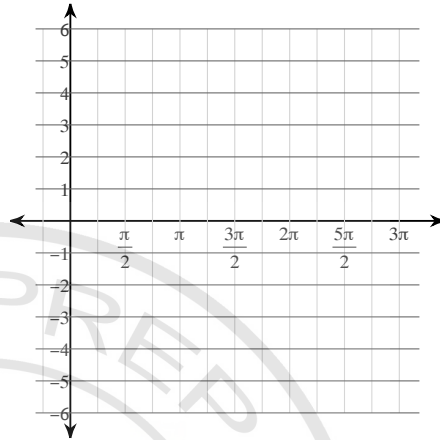
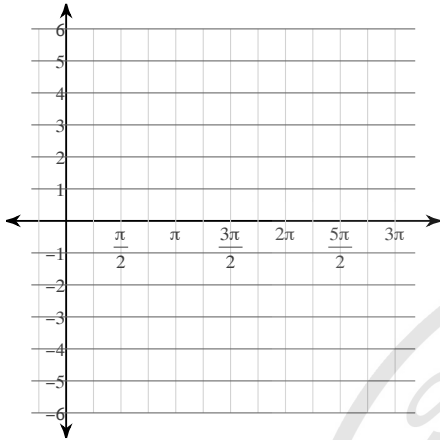


Assignment : Interpretation of Trigonometric graph

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

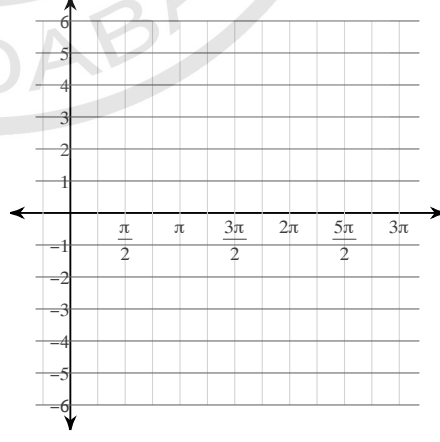
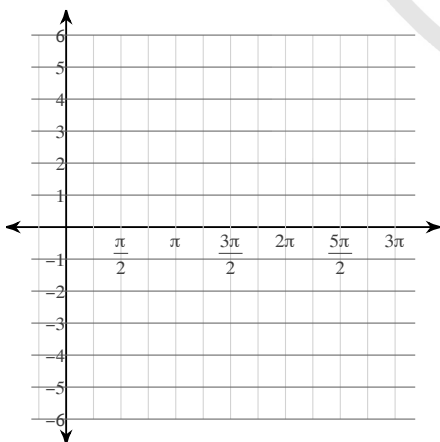
1)  $y = \frac{1}{2} \cdot \sin\left(\theta + \frac{3\pi}{4}\right) - 2$

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

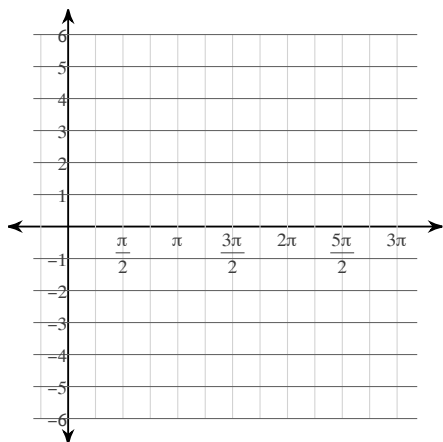


3)  $y = \frac{1}{2} \cdot \sin\left(\theta + \frac{3\pi}{4}\right) - 1$

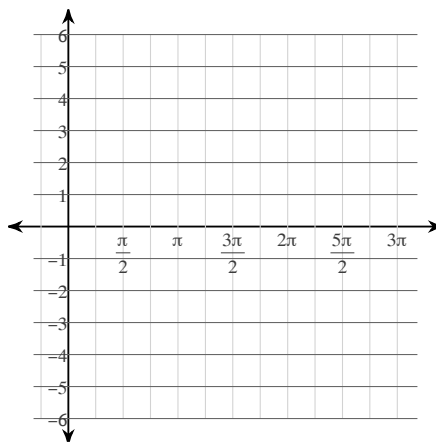
4)  $y = 2\sin\left(\theta - \frac{3\pi}{4}\right) + 2$



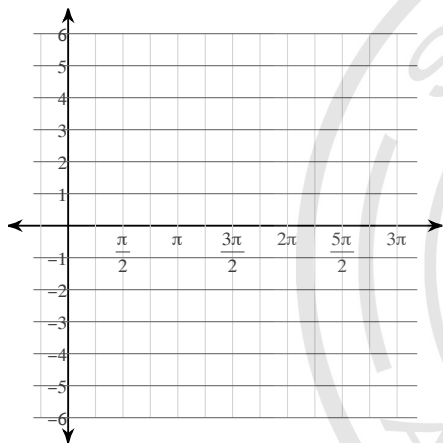
$$5) y = \frac{1}{2} \cdot \sin\left(\theta - \frac{2\pi}{3}\right) + 2$$



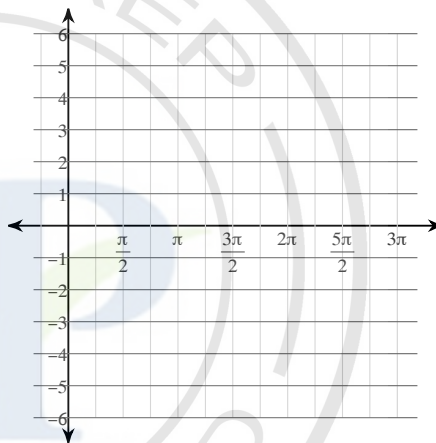
$$6) y = \frac{1}{2} \cdot \sin\left(\theta + \frac{2\pi}{3}\right)$$



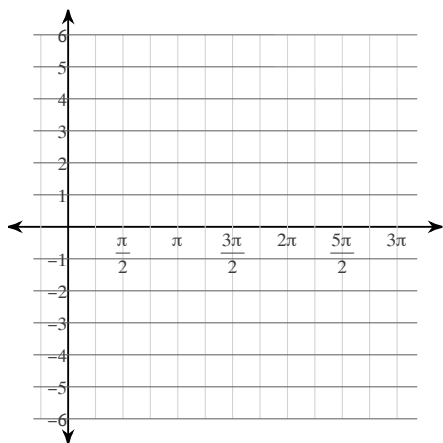
$$7) y = 2\sin\left(\theta + \frac{5\pi}{6}\right) + 2$$



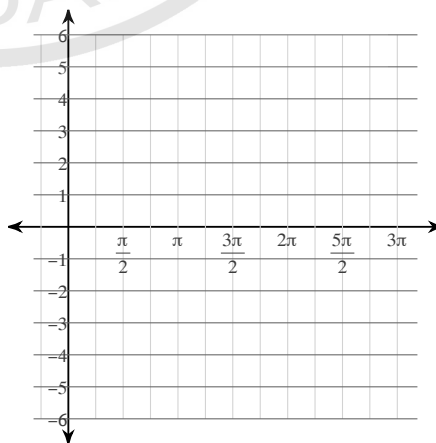
$$8) y = \sin\left(\theta - \frac{\pi}{3}\right) + 2$$



$$9) y = 3\sin\left(\theta - \frac{5\pi}{6}\right) + 2$$



$$10) y = 1 + 2\sin\left(\theta + \frac{5\pi}{4}\right)$$



Solve each equation for  $0 \leq \theta < 2\pi$ .

$$11) \tan^2 \theta - 3 = 0$$

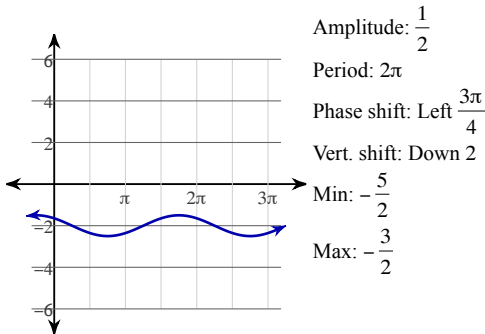
$$12) \cos^2 \theta - 3\sin \theta - 2 = \sin^2 \theta$$

$$13) 2 = 3 - 4\cos^2 \theta$$

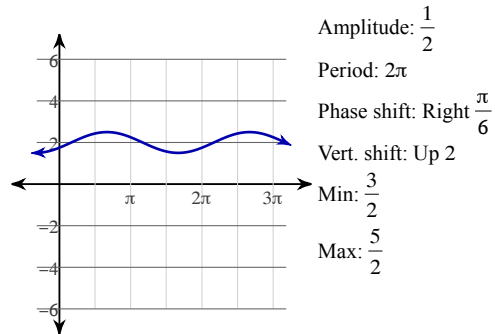
$$14) -4\cos \theta + \sin^2 \theta = 2 + 3\cos^2 \theta$$

# Answers to Assignment : Interpretation of Trigonometric graph

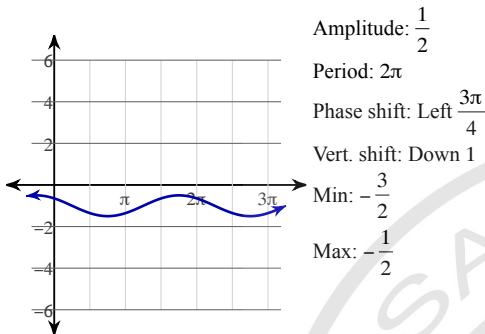
1)



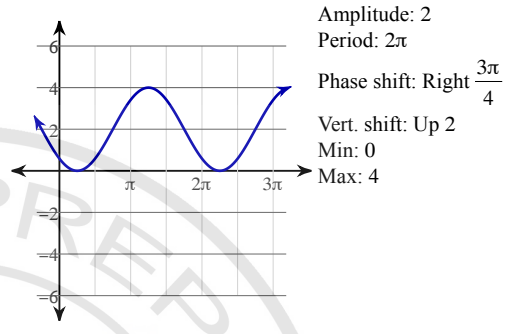
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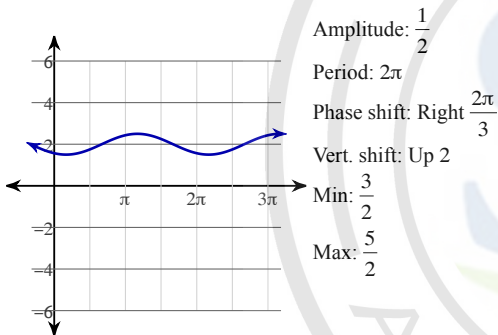
3)



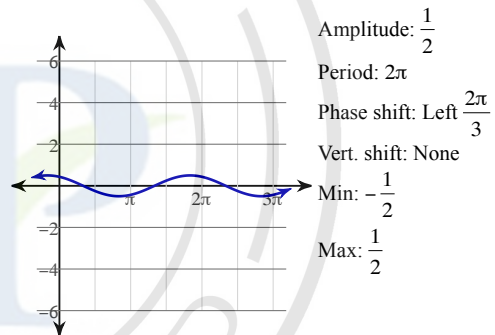
4)



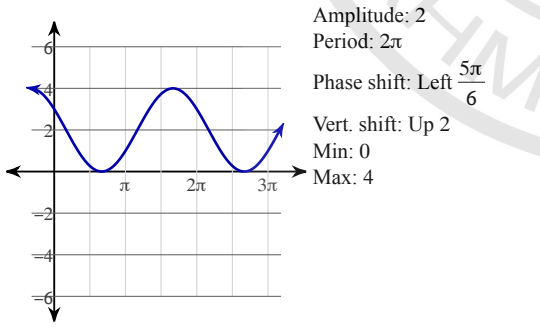
5)



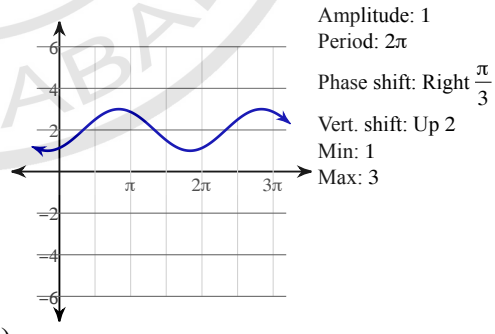
6)



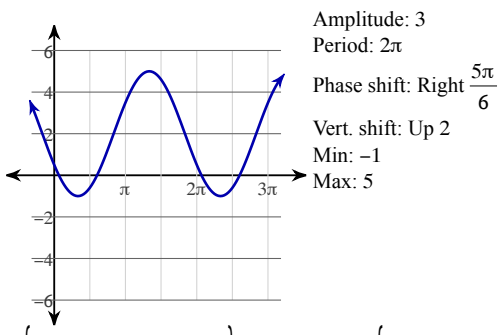
7)



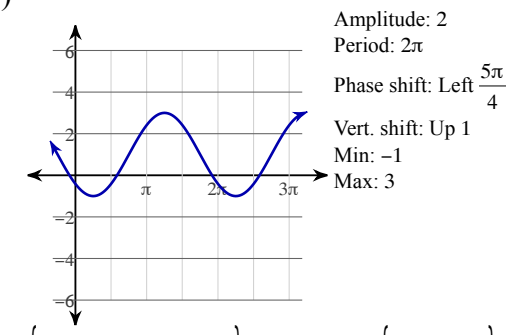
8)



9)



10)



11)  $\left\{ \frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3} \right\}$

12)  $\left\{ \frac{7\pi}{6}, \frac{3\pi}{2}, \frac{11\pi}{6} \right\}$

13)  $\left\{ \frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3} \right\}$

14)  $\left\{ \frac{2\pi}{3}, \frac{4\pi}{3} \right\}$