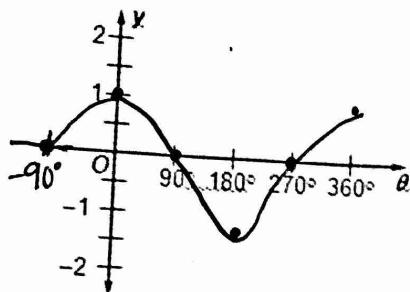


# PRACTICE PROBLEMS: Master E

1-3: State the amplitude, period, and phase shift for each function. Then graph the function.

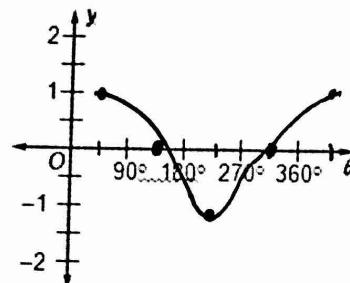
1.  $y = \sin(\theta + 90^\circ)$

A: 1 P:  $360^\circ$  PS:  $-90^\circ$



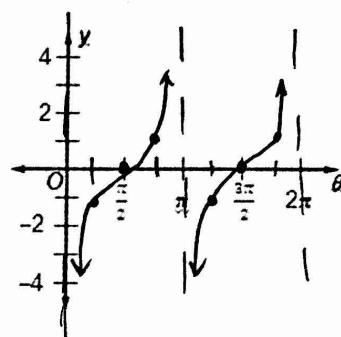
2.  $y = \cos(\theta - 45^\circ)$

A: 1 P:  $360^\circ$  PS:  $45^\circ$



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

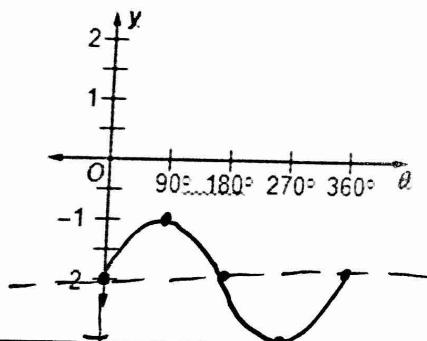
A: N/A P:  $\pi$  PS:  $\frac{\pi}{2}$



4-6: State the amplitude, period, vertical shift, and equation of the midline of each function. Then graph it.

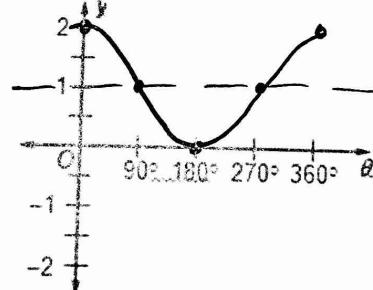
4.  $y = \sin \theta - 2$

A: 1 P:  $360^\circ$  vs: -2 M:  $y = -2$



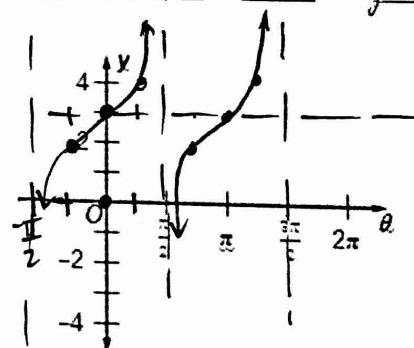
5.  $y = \cos \theta + 1$

A: 1 P:  $360^\circ$  vs: 1 M:  $y = 1$



6.  $y = \tan \theta + 3$

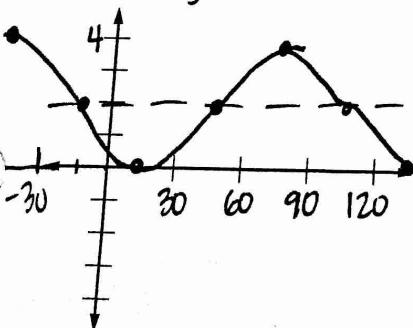
A: N/A P:  $\pi$  vs: 3 M:  $y = 3$



7-9: State the amplitude, period, phase shift, and vertical shift of each function. Then graph it.

7.  $y = 2 \cos[3(\theta + 45^\circ)] + 2$

A: 2 P:  $120^\circ$  PS:  $-45^\circ$  vs: 2  
 $\frac{360}{3}$



8.  $y = 3 \sin[2(\theta - 90^\circ)] + 2$

A: 3 P:  $180^\circ$  PS:  $90^\circ$  vs: 2



9.  $y = 4 \tan(\theta - \pi/4)$

A: N/A P:  $\pi$  PS:  $\frac{\pi}{4}$  vs: 0

