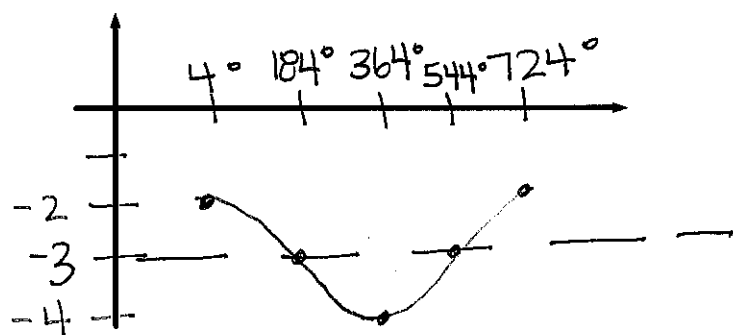


## Warmup - Graphing Sin/Cos #4

(Make appropriate tick marks on the x- and y-axis, mark all critical points and provide the following information.)

1. Graph:  $f(x) = \cos\left(\frac{\theta}{2} - 2\right)$



domain:  $[4^\circ, 724^\circ]$

period:  $724 - 4 = 720^\circ$   
 $\frac{360}{1/2} = \frac{360 \cdot 2}{1} = 720^\circ$

phase shift:  $4^\circ$

vertical shift:  $-3$

amplitude:  $1$

range:  $[-4, -2]$

Domain:  $\left[\frac{\theta}{2} - 2 = 0^\circ, \frac{\theta}{2} - 2 = 360^\circ\right]$

$\frac{\theta}{2} = 2$

$\theta = 4^\circ$

$\frac{\theta}{2} = 362$

$\theta = 724^\circ$

cos: