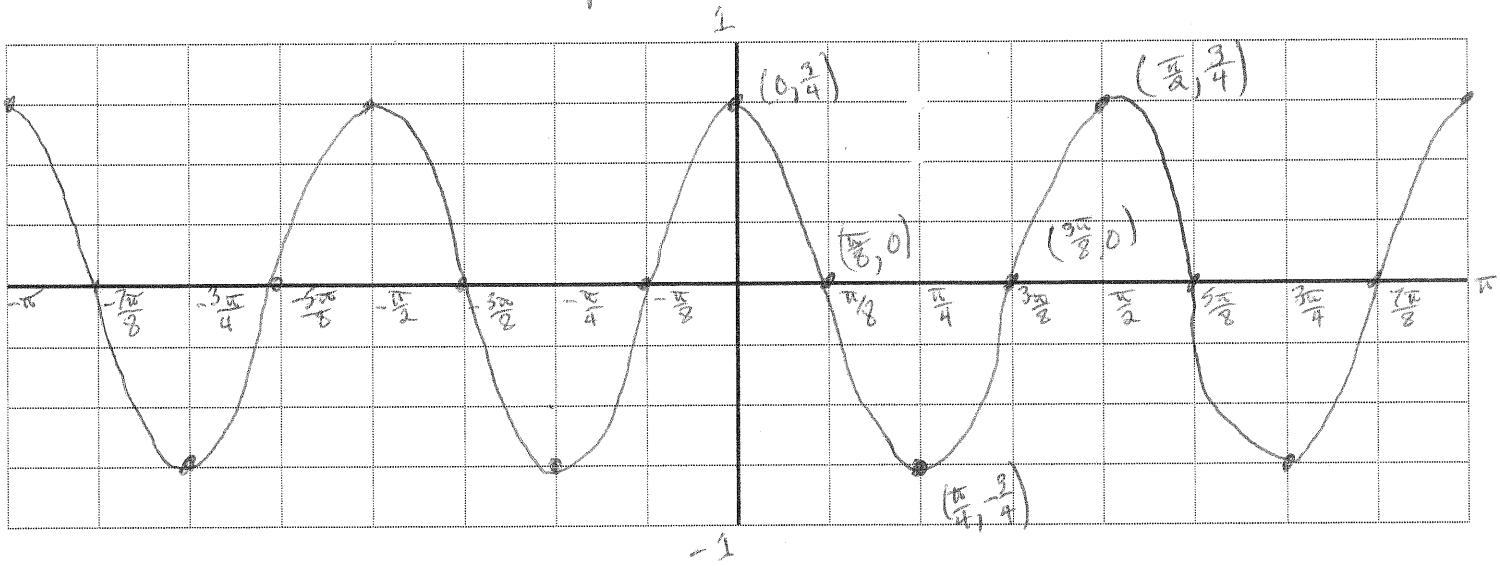
Name Key

Function	Amplitude	Period	Phase shift	Range	Middle y value
$y = -4\cos\frac{2x}{3} - 1$	4	3π	0	$[-5, 3]$	-1
$y = \frac{1}{4}\sin\left(\frac{x}{2} - \frac{\pi}{4}\right) - 2$	$\frac{1}{4}$	4π	$\frac{\pi}{2}$	$[-2\frac{1}{4}, -1\frac{3}{4}]$	-2
$y = \frac{5}{2}\cos(\frac{\pi x}{10}) + 5$	$5/2$	20	0	$[2.5, 7.5]$	5
$f(x) = -\frac{3}{4}\cos(4x - \pi)$	$\frac{3}{4}$	$\frac{\pi}{2}$	$\frac{\pi}{4}$	$[\frac{3}{4}, \frac{3}{4}]$	0
$f(x) = 2\sin\left(3x + \frac{\pi}{2}\right) + 1$	2	$\frac{2\pi}{3}$	$-\frac{\pi}{6}$	$[-1, 3]$	1

Graph the given functions. You MUST do the following:

- draw **dark round dots** at any maximum or minimum points
- draw a dotted horizontal line through the middle y value of the graph
- draw **dark round dots** anywhere the graph crosses the dotted line
- scale your graph so each tick mark is ¼ of the period
- label all tick marks on the x AND y axes.

$f(x) = -\frac{3}{4}\cos(4x - \pi)$, per: $\frac{\pi}{2}$, p.s.: $\frac{\pi}{4}$



$f(x)=2\sin\left(3x+\frac{\pi}{2}\right)+1$, per $\frac{2\pi}{3}$, p.s. $\frac{-\pi}{6}$, range $[-1,3]$, middle value $=1$