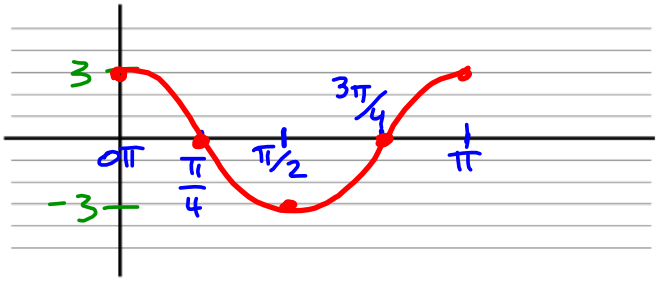
PreCalculus **Name** _____
Practice Quiz A – Graphing Sine and Cosine

Graph each function, labeling all critical points on the x-axis and y-axis. Identify the characteristics.
(2 points each blank. 5 points each graph.)

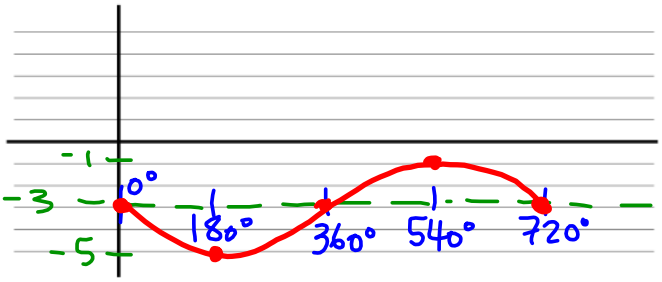
1. Graph $y = 3\cos(2x)$

amplitude = 3
period = π
phase shift = none
vertical shift = none
domain: $[0, \pi]$
range: $[-3, 3]$



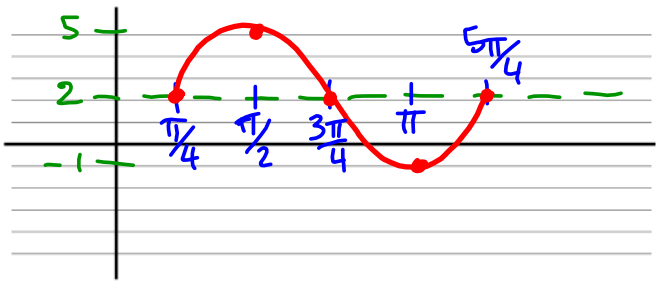
2. $y = -2\sin\left(\frac{1}{2}\theta\right) - 3$

amplitude = 2
period = 720°
phase shift = none
vertical shift = −3
domain: $[0°, 720°]$
range: $[-5, -1]$



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

amplitude = 3
period = π
phase shift = $\pi/4$
vertical shift = +2
domain: $[\pi/4, 5\pi/4]$
range: $[-1, 5]$



$2x - \pi/2 = 0$
$\frac{1}{2} \cdot 2x = \pi/2 \cdot \frac{1}{2}$

$2x - \pi/2 = 4\pi/2$
$\frac{1}{2} \cdot 2x = 5\pi/2 \cdot \frac{1}{2}$