1. Graph 2 periods of the following equations:

 a.  b.  c. 

2. Write a cosine function with the given characteristics:

 Amplitude of 2, reflection over the x-axis, period of  , phase shift units , vertical shift up 4 units

3. List the critical points for one period of the sine graph if it has a critical point spacing of  and phase shift of and a midline of .

4. Write an equation for the following graphs in terms of both sine and cosine. Be sure to identify the starting point you use for both equations.

 a. b.  

c.  d. 