1. Determine the amplitude, period and phase shift of \( y = 2 \sin \left( \frac{2}{3}x + \pi \right) \). Sketch the graph of the function. Include all zeros, max's, min's and include at least 2 periods.

2. Sketch at least 2 periods of \( y = \tan(2x - \frac{\pi}{2}) \)

3. Find an equation of the form \( y = A \sin Bx \) for the following graph.

4. Find the exact value for each of the following:
   a) \( \tan^{-1}(-1) \)  
   b) \( \cos^{-1}(-2) \)  
   c) \( \sin^{-1}(\sin \frac{5\pi}{4}) \)