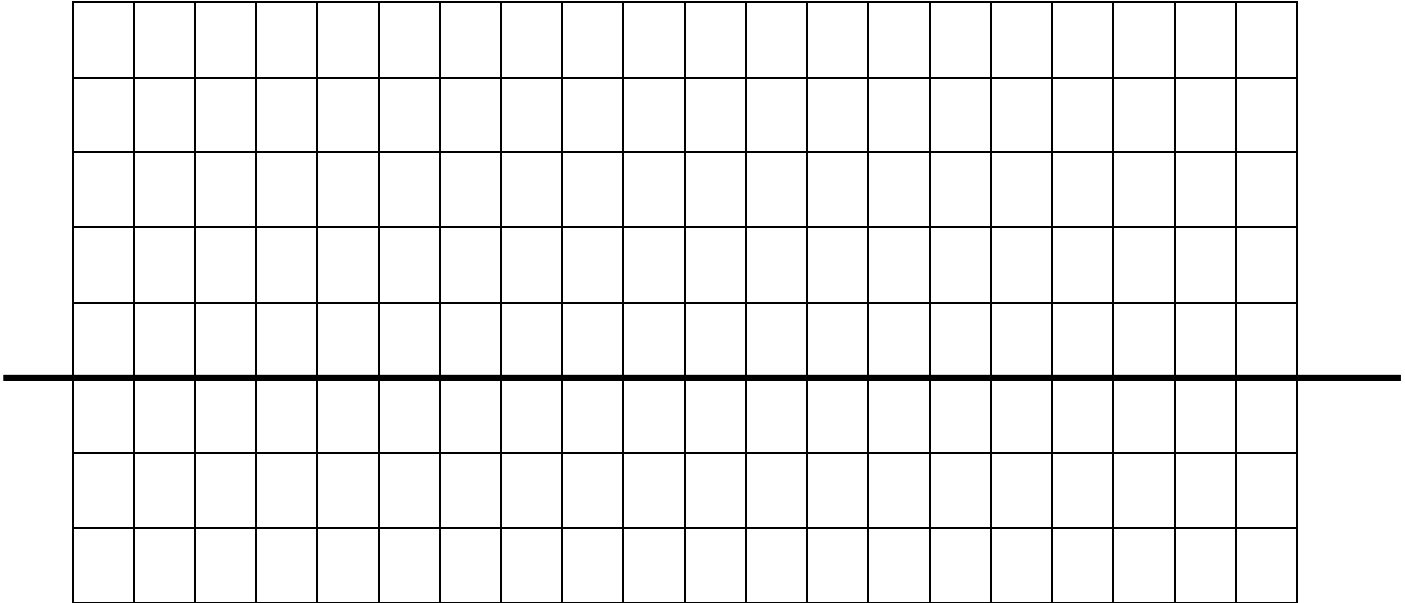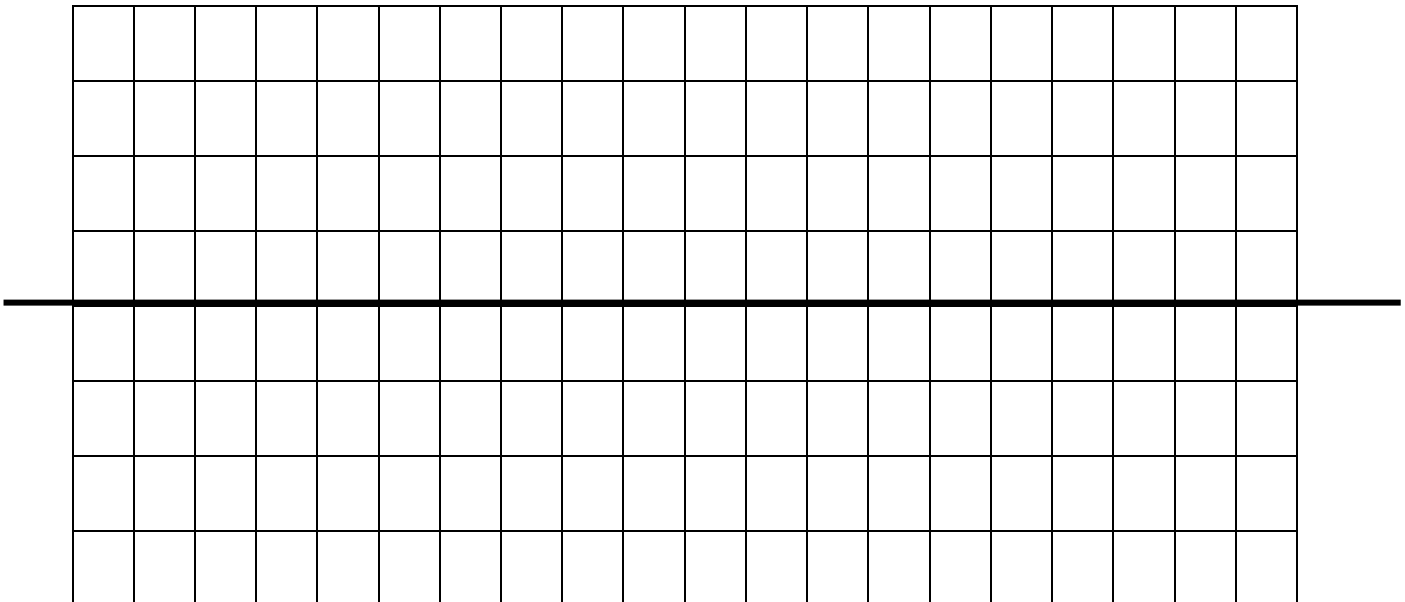Name : _____

Date : _____

Graph two full periods of the function and label the periods on the graph. You must give key points using your table of values. Please state the domain and the range of each graph.

1. $y = 1 - 4\cos\ (2x + \pi)$

2. $y = -1 + 3\sin\left(4x - \frac{\pi}{2}\right)$

3. Identify a, b, c, and d; describe the graph of $y = -2\cos\left(\frac{1}{2}x - \pi\right) + 3$.

a=   vertical_____ by _____

b=   horizontal_____

c=   phase shift_____ units to the _____

d=   vertical shift_____ units _____

                                            Is there a reflection? _____