Key Features of Trigonometric Functions

5. Given $g(x) = 6\sin(2x) + 3$

   a) Determine amplitude, period, vertical shift and phase shift.

   b) Determine domain and range.

   c) Determine the y-intercept.

   d) Determine the x-intercept(s) for **one period**.

   e) Determine **all** zeroes.

6. Sketch the graph of the function in the grid provided. Determine the key properties of the function. Clearly label the key properties on the graph.

a) $f(x) = -\cos\left[3\left(x + \frac{\pi}{4}\right)\right] + 1$

vert. shift _____

period_____

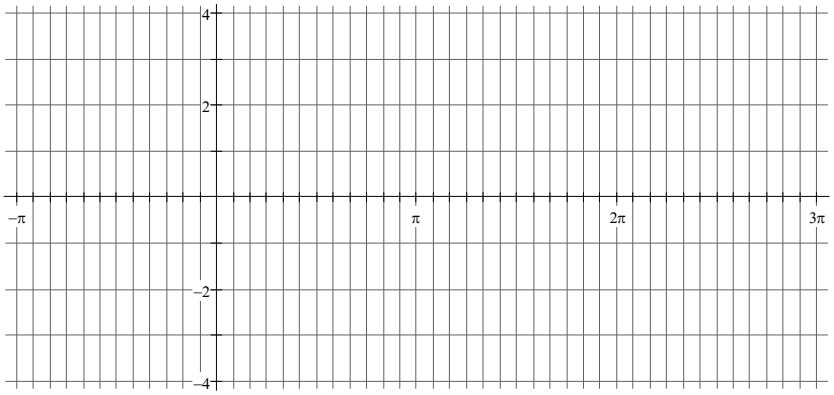
phase shift _____

amplitude _____

min value _____ max value _____

Range _____

Domain _____



For *y*-int, _____

For x-ints for one period, _____

For all x-ints, _____

6. b) $f(x) = 2\sin\left[-\left(x - \frac{\pi}{6}\right)\right] - 1$

vert. shift _____

period_____

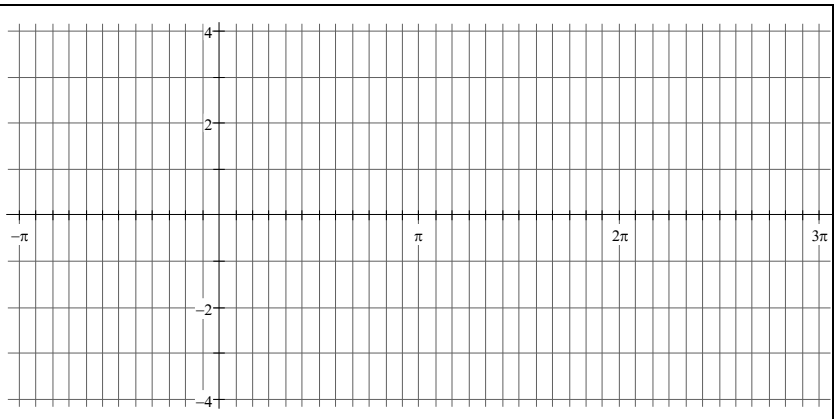
phase shift _____

amplitude _____

min value ____ max value ____

Range _____

Domain _____



For *y*-int, _____

For x-ints for one period, _____

For all x-ints, _____