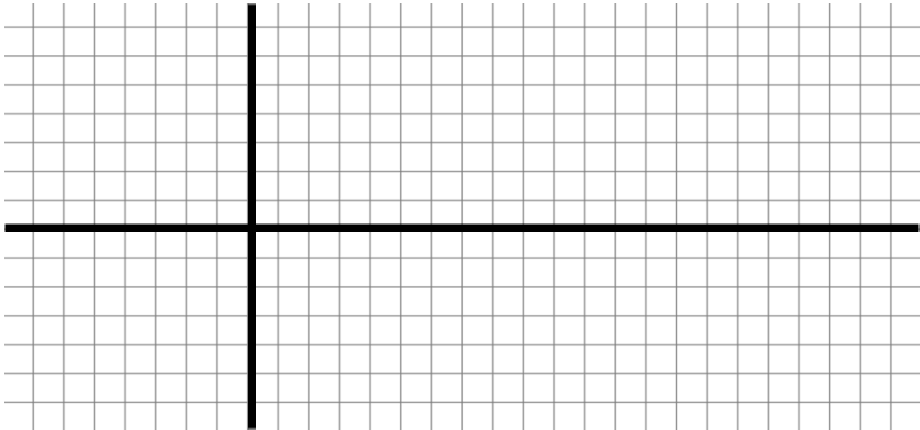


b) For the following function, graph its parent function, and fill out the table with a **MAPPING STATEMENT** for each transformation. Draw two complete cycles of the graph and ensure your axis are clearly labeled. Fill in the table according to the **transformed function**.

[6 Marks]

$y = -\cos\cos\left[\frac{1}{2}\theta + 45^\circ\right] - 1$

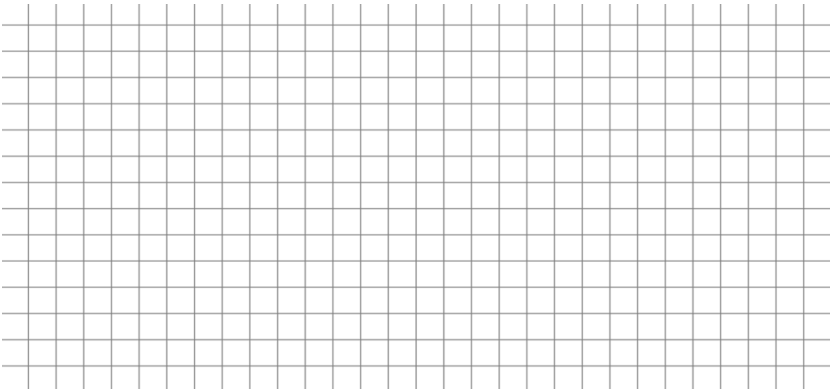
(θ°, y)				
(0, 1)				
(90, 0)				
(180, -1)				
(270, 0)				
(360, 1)				



Domain	
Range	
Maximum	
Minimum	
Period	

4) A Ferries wheel with a diameter of 80 meters takes 15 minutes to get from the bottom to the top of the ride. The bottom of the wheel is 3 meters above the ground. A person gets on at t=0 on the bottom of the ride and is on the ride for two complete cycles.

a) Sketch a graph of the person’s height as a function of time in minutes. [2 Marks]



b) Develop the equation that represents a person’s height about the ground as a function of time. [2 Marks]

c) At what time(s) in the first 15 minutes is a person 25 meters off the ground? Round your answer to the nearest tenth of a meter. [3 Marks]