

5. Complete a table which gives the height ( $h$ ) of the passenger as a function of time ( $t$ ) in seconds.


6. How long does it take for the Ferris Wheel to complete a revolution?
7. On the graph paper, graph the height of the passenger as a function of time for three revolutions of the Ferris Wheel. Plot the points for each second and connect the points with a *smooth* curve.
8. What is the minimum height? The maximum height?
9. Approximately how many seconds after the ride starts is the passenger at a height of 8 feet for the first time?
10. At what value of  $t$  is the rider at a height of 8 feet for the second time?
11. List all of the values for  $t$  during the three revolutions that correspond to a height of 8 feet.
12. If the ride continued for two more revolutions, what would be the values for  $t$  that correspond to a height of 8 feet?
13. During the 99th revolution, what would be the two values for  $t$  that correspond to a height of 8 feet?
14. If you know the first time that a passenger is at a certain height, except the maximum and minimum height, how do you find the next one?
15. If you know the first time that a passenger is at a certain height, except the maximum and minimum height, how do you find the third one?
16. Compare your graph to the graphs of other students in your group. How does the radius of the Ferris Wheel affect the graph?