**Activity 6.3.1B High Up on the Wheel**

For each of the following Ferris wheels, create a table of values and sketch a detailed graph for the height of a rider above ground as a function of time. Assume everyone boards at the 3 o’clock **position**. Then identify the amplitude, period and equation of the midline.

1. The High Roller in Las Vegas.

The ride lasts 60 minutes for 2 rotations.

Height: 550 feet

Diameter 520 feet

The period of this function is \_\_\_\_\_\_\_

The equation of the midline of the graph of this function is \_\_\_\_\_\_\_

The amplitude of this function is \_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Time |  |  |  |  |  |  |  |  |  |
| Height |  |  |  |  |  |  |  |  |  |

GRAPH:



1. The London Eye

The ride lasts 80 minutes for 2 rotations.

Height: 135 meters

Diameter 120 meters

The period of this function is \_\_\_\_\_\_\_

The equation of the midline of the graph of this function is \_\_\_\_\_\_\_

The amplitude of this function is \_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Time |  |  |  |  |  |  |  |  |  |
| Height |  |  |  |  |  |  |  |  |  |

GRAPH:



1. Underwater wheel (You board above ground and then go below ground through a tunnel built under the water

The ride lasts 16 minutes for two rotations.

Height: 30 feet above ground and 14 feet below ground

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Time  |  |  |  |  |  |  |  |  |  |
| Height  |  |  |  |  |  |  |  |  |  |

The period of this function is \_\_\_\_\_\_\_

The equation of the midline of the graph of this function is \_\_\_\_\_\_\_

The amplitude of this function is \_\_\_\_\_\_\_

GRAPH:

