Name_____Entry Slip Ferris Wheel Problems 2-3-17 Hour 1 2 3 4 5 6 7

A carnival Ferris wheel with a diameter of 9 m. makes one complete revolution every 44 seconds. The bottom of the wheel is 1.2 m above the ground. If a person is at the minimum height when a stopwatch is started, then determine how high above the ground that person will be after 6 minutes and 41 seconds.

1. What is the equation of the midline that this Ferris wheel model is expecting?

2. Since we are at a minimum at time 0, write a model that predicts the height above the ground in terms of seconds. Let y=height above the ground and x = time in seconds since start of motion.

3. After 6 minutes and 41 second the person is approximately _____ meters off the ground

A carnival Ferris wheel with a radius of 20 m. makes one complete revolution every 248 seconds. The bottom of the wheel is 1.8 m above the ground. If a person is at the maximum height when a stopwatch is started, then determine how high above the ground that person will be after 9 minutes and 4 seconds.

4. What is the equation of the midline that this Ferris wheel model is expecting?

5. Since we are at a maximum at time 0, write a model that predicts the height above the ground in terms of seconds. Let y=height above the ground and x = time in seconds since start of motion.

6. After 9 minutes and 4 second the person is approximately _____ meters off the ground

A carnival Ferris wheel with a radius of 18 m. makes one complete revolution every 308 seconds. The bottom of the wheel is 0.9 m above the ground. If a person is at the height of 18.9 m and is on the way up when a stopwatch is started, then determine how high above the ground that person will be after 12 minutes and 46 seconds.

7. What is the equation of the midline that this Ferris wheel model is expecting?

8. Since we are at a height of 18.9 m and on the way up when the stopwatch starts, write a model that predicts the height above the ground in terms of seconds. Let y=height above the ground and x = time in seconds since start of motion.

9. After 12 minutes and 46 second the person is approximately _____ meters off the ground