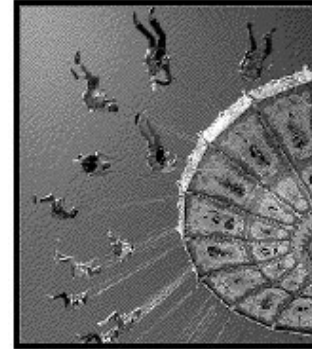


TURN OF THE CENTURY



DATA COLLECTION

(while on the ride)

1. How long did the ride last? _____s
2. How many times did you go around? _____s
3. When stationary, how far were you from the axis of the rotation?
_____m
4. When moving, how far from the axis of rotation were you now?
_____m
5. Does the distance from you to the chair in front increase or decrease as the ride speeds up? At maximum speed, what is that distance?
_____, _____m

(while off the ride)

6. How many chairs are on the ride? _____
7. When stationary, how far apart are they? _____m

QUESTIONS

8. What is the circumference at the radius from which the chairs are hanging? _____m
9. Hence, what is the radius $C = 2\pi R$? $R =$ _____m
10. Is this radius the same as you estimated in Q3?
11. Using information in Q1 and Q2 to get the time for a single turn and Q4, calculate the maximum speed you move.
$$\text{speed} = \frac{\text{circumference}}{\text{period of rotation}} = \frac{2\pi \text{Radius}}{\text{period}} = \text{speed} \text{ _____ m/s}$$
12. How many miles/hour does this speed correspond to? _____mph
(1 mile = m and 1 hour = 3600 seconds)
13. Is this faster than your school bus coming to Lagoon?
14. As the ride speeds up, what happens to the passenger, her chair, and the chain supporting both?
15. What is the physics that leads to this effect called? Or how do you explain what you observe?