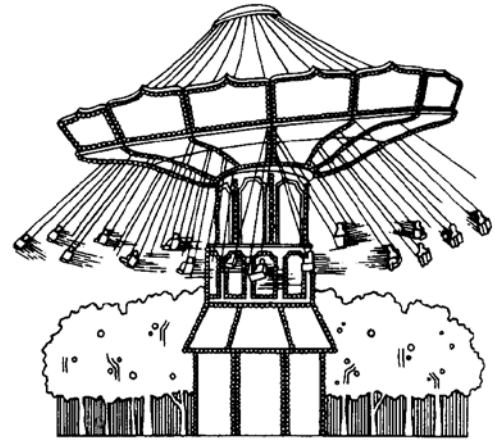


Wave Swinger

1. Calculate the period of the wave swinger.

(Hint: See Appendix B.)



1. Find the angular velocity of the chairs for each radii.

- a. Inner radius $r_i = 6.9$ m

- b. Middle radius $r_m = 8.1$ m

- c. Outer radius $r_o = 9.3$ m

2. Find the tangential velocity for each of the radii.

- a. Inner

- b. Middle

- c. Outer

3. Find the centripetal acceleration for the inmost radius.
4. Draw a force diagram for one of the chairs on the inner radius.
5. At what angle with respect to the vertical do the chairs hang?
6. What would the angular velocity of the chairs have to be rotating in order to be hanging at 45 degrees?