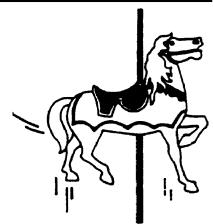
## **QUALITATIVE QUESTIONS**

For the following questions, consider a horse that moves up and down.

- 1. Which horses, those on the inside or those on the outside, have the greatest tangential speed? Explain.
- 2. How does the angular speed of an outer horse compare to that of an inner horse?
- 3. While the ride is revolving at a constant angular speed, place a foam ball on the carousel. Describe the path that it takes.

- 4. What types of acceleration do people riding on the carousel experience?
- 5. Record the vertical Force Factor reading when ascending and descending.



## **Grand Ole Carousel**

## Grand Ole Carousel QUALITATIVE QUESTIONS (continued)

6. Record the horizontal Force Factor reading as directed along the radius of the ride (point one end of the force factor meter to the center of the carousel and the other end to the outside). Is this force directed inward or outward?

- 7. What happens to the centripetal acceleration as the distance from the center of the carousel increases? How is your answer supported by your observations from the previous question?
- 8. From the point of view of someone watching the ride from outside of the ride, determine the shape of the horse's path as viewed:
  - a. from above the ride
  - b. from the side