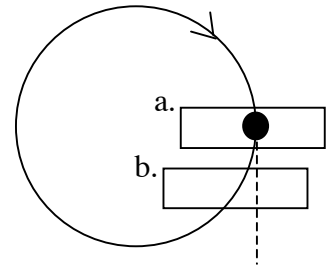


QUALITATIVE QUESTIONS (continued)

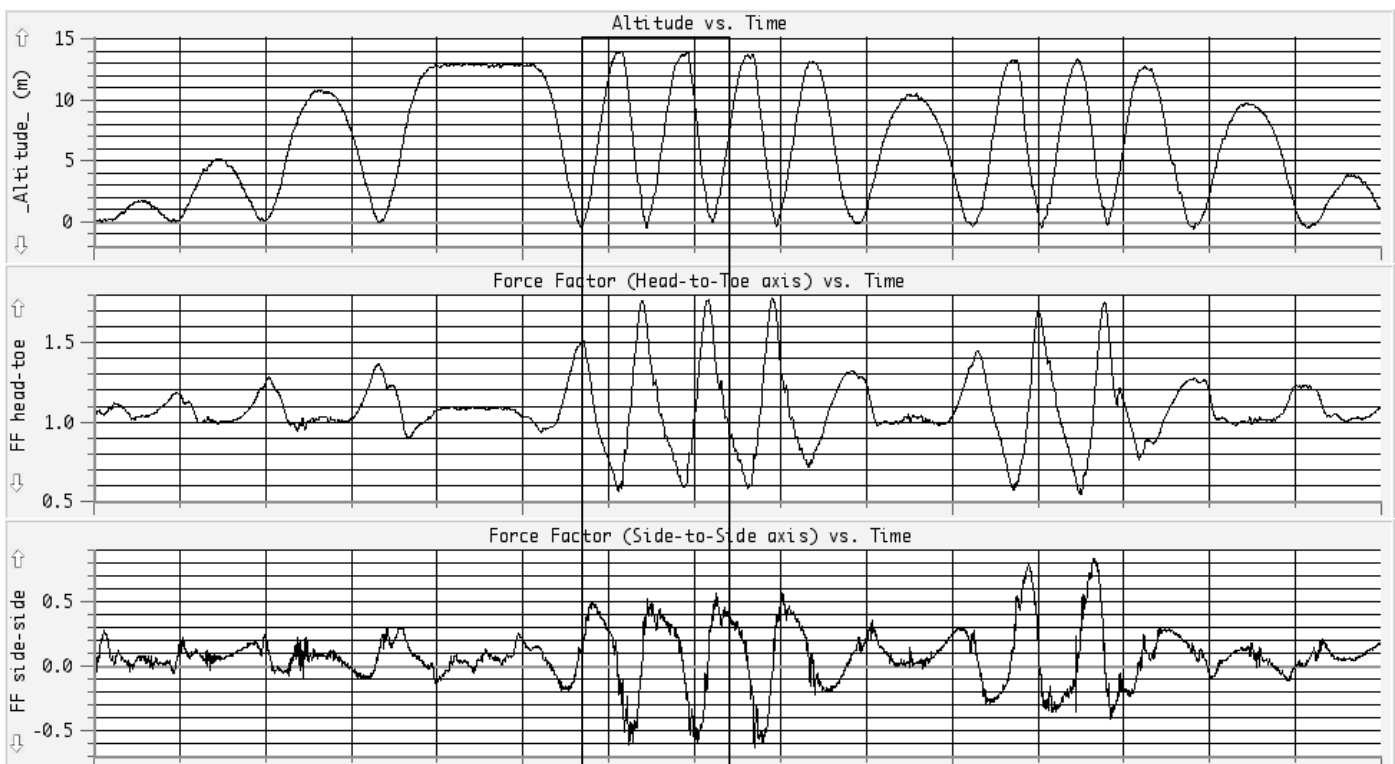
8. a. As the ride spins from point a. to point b., does a rider tend to slide to the inside or to the outside of the circle?



b. Is something pushing the rider in the direction you chose? If yes, what?

c. If the rider isn't actually pushed, why does the rider tend to slide? As part of your explanation, draw a dotted line to indicate the path the rider would follow if the seat were suddenly slippery and had no restraints and explain its significance in your answer.

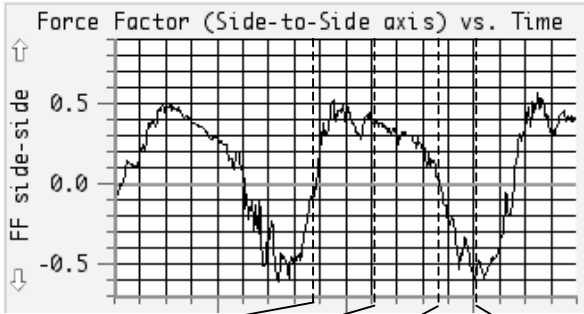
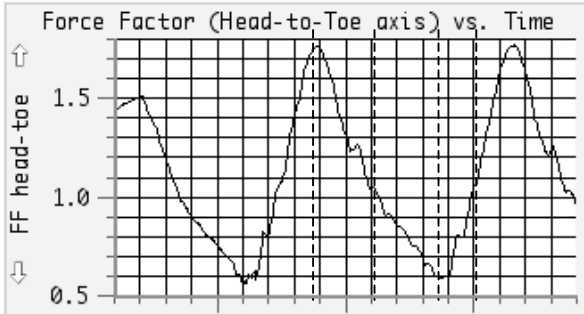
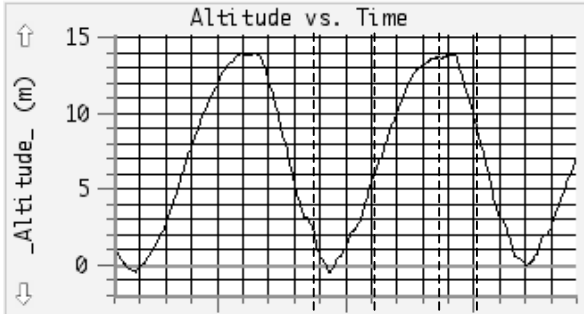
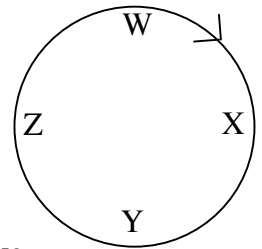
The questions on the next page refer to the boxed portion of the Force Factor and altitude graphs.



QUALITATIVE/QUANTITATIVE QUESTIONS

The following graphs are enlargements of the highlighted sections of the graphs on the previous page.

9. Label positions W, X, Y, and Z in the boxes at the bottom of the graphs.



Four empty rectangular boxes, each with a line pointing to one of the four vertical dashed lines in the graphs above.

10. Use the Force Factor graphs to make quantitative free-body diagrams for a 70 kg rider at positions W, X, Y, and Z.

Four empty rectangular boxes for free-body diagrams, labeled W, X, Y, and Z. Box W is at the top, Y is at the bottom, Z is on the left, and X is on the right.

11. Draw vectors representing the net force on the rider at positions W, X, Y, and Z with a solid line and the acceleration of the rider with a dotted line.

Four empty rectangular boxes for vector diagrams, labeled W, X, Y, and Z. Box W is at the top, Y is at the bottom, Z is on the left, and X is on the right.