

## Chapter Eight

### 1. Circular Motion:

a) What is the difference between rotational speed and tangential speed?

How are they related?

Why does the bug on the outside of the turntable in figure 8.2 travel twice as fast as the other bug?

b) If you're on a "merry-go-round" like in figure 8.3 travel at 30 rpm's with a tangential speed of 4 m/s at the outer edge how would your tangential speed change if you move  $\frac{1}{2}$  way in?

c) When your car goes around a corner which tire travels faster? ... which one travel slower?  
Why?

d) Explain why train wheels have a unique shape? .... In detail!!