103. The problem asks us to assume v_{com} and ω are constant. For consistency of units, we write

$$v_{\text{com}} = (85\,\text{mi/h}) \left(\frac{5280\,\text{ft/mi}}{60\,\text{min/h}} \right) = 7480\,\text{ft/min} .$$

Thus, with $\Delta x = 60$ ft, the time of flight is $t = \Delta x/v_{\text{com}} = 60/7480 = 0.00802$ min. During that time, the angular displacement of a point on the ball's surface is

$$\theta = \omega t = (1800\,\text{rev/min})(0.00802\,\text{min}) \approx 14\,\text{rev} .$$