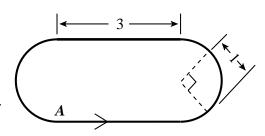**Problem statement** This picture of an "oval" racetrack has been drawn with some care. Dimensions are in miles. Two portions of the track are straight and two portions are circular arcs, as shown. Imagine that you drive a car on the track for 20 miles, beginning at the point $A$ in the direction indicated (counterclockwise). Sketch a graph of the curvature, $\kappa$, as a function of the distance driven. (You may assume that the curvature is a continuous function of distance – structures such as railroads are actually built to interpolate curvature continuously.) Briefly and clearly explain your graph.