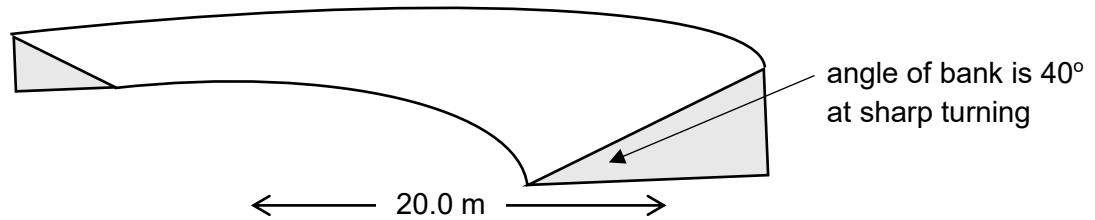


- 11 The section of a cycling track where sharper turns are made has a horizontal radius of 20.0 m, and is banked at  $40^\circ$  to the horizontal.



Given that the maximum speed of the cyclist of mass 80 kg is  $60 \text{ km h}^{-1}$ , what is the difference in frictional force that the bicycle tyres must provide compared to an unbanked track?

- A** 140 N      **B** 450 N      **C** 760 N      **D** 1200 N