

A bicycle rider coasts down a long smooth incline, as shown.
Calculate the terminal speed, in m/s. Show all your work.

Data: $\sin(10 \text{ degrees}) = 0.17$
 air resistance force = $c v^2$ where $c = 0.20 \text{ N s}^2/\text{m}^2$
 mass of bicycle and rider = 80 kg

