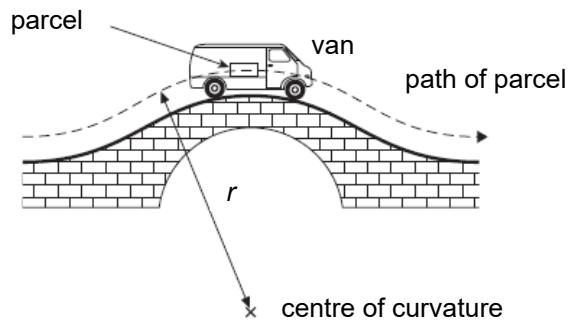


- 7 A 12 kg parcel containing fragile contents is placed on the floor of a delivery van that is passing over a hump-backed bridge on the straight section of a road. The radius of curvature of the bridge is 23 m.



What is the maximum speed that the van can travel at the top of bridge so that the parcel does not lift off the floor of the van?

- A  $4.3 \text{ m s}^{-1}$
- B  $15 \text{ m s}^{-1}$
- C  $23 \text{ m s}^{-1}$
- D  $52 \text{ m s}^{-1}$