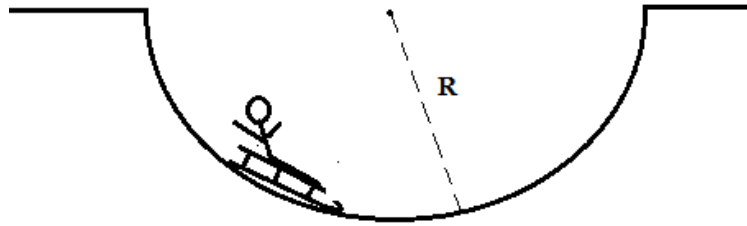


Sledding Centripetal Force

A little girl rode her sled up and down several hills, sledding over six semi-circular dips with varying radii of curvature. Sledding over each dip would change her speed. Her different speeds at the bottom of the dip, v , are listed below, along with the radius of curvature, R , of the corresponding dip.



Dip	R	v
A	4 m	12 m/s
B	8 m	12 m/s
C	2 m	6 m/s
D	4 m	3 m/s
E	2 m	9 m/s
F	6 m	3 m/s

Rank the force of the ground on the sled at the bottom of each dip:

Largest 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ Smallest

Justify your ranking: