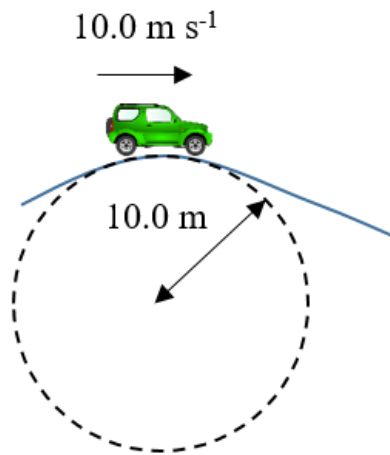**9** A car drives over a hump with a circular radius of 10.0 m at a speed of 10.0 m s⁻¹.

10.0 m s⁻¹

10.0 m

A 250 g mass is suspended vertically from the ceiling of the car by a spring of force constant 25.0 N m⁻¹.

What happens to the spring as the car passes over the hump?

<u>While passing over hump</u>

A Shortens by 10 cm

B Shortens by 20 cm

C Lengthens by 10 cm

D Lengthens by 20 cm