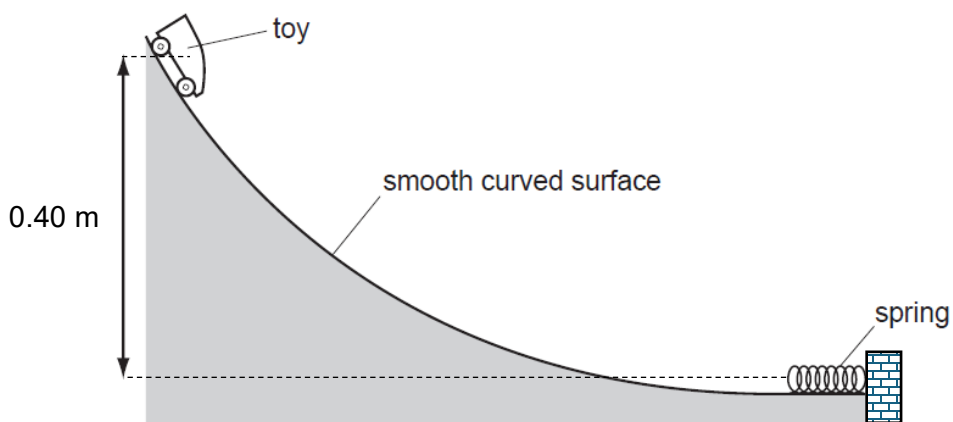


- 8 A toy car of mass 0.22 kg is released from rest and runs down a smooth curved surface through a vertical distance of 0.40 m , as shown. It strikes a horizontal spring of force constant 350 N m^{-1} and compresses it by a distance x before coming to rest.



Assuming no losses in mechanical energy, what is the value of x ?

- A $4.9 \times 10^{-3} \text{ m}$ B $6.2 \times 10^{-3} \text{ m}$ C $3.5 \times 10^{-2} \text{ m}$ D $7.0 \times 10^{-2} \text{ m}$