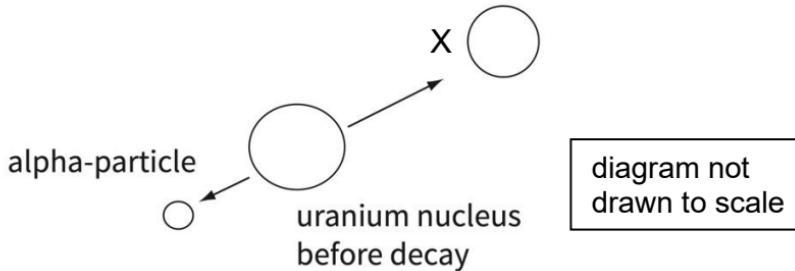


- 4 A stationary uranium nucleus disintegrates, emitting an alpha-particle of mass 6.65×10^{-27} kg and another nucleus X of mass 3.89×10^{-25} kg.



Which of the following gives the ratio $\frac{\text{speed of alpha-particle}}{\text{speed of nucleus X}}$?

- A** 0.017
- B** 0.98
- C** 1.0
- D** 58

- 5 A force F acts on a system of masses M_1 , M_2 and M_3 on a frictionless floor as shown.