

- 11 A beam of α -particles collides with a lead sheet. Each α -particle in the beam has a mass of 6.6×10^{-27} kg and a speed of 1.5×10^7 ms $^{-1}$.

5.0×10^4 α -particles per second collide with an area of 1.0cm^2 of lead. Almost all of the α -particles are absorbed by the lead so that they have zero speed after collision.

What is an estimate of the average pressure exerted on the lead by the α -particles?

- A** 5.0×10^{-15} Pa
- B** 5.0×10^{-13} Pa
- C** 5.0×10^{-11} Pa
- D** 5.0×10^{-9} Pa

- 12 An object in air is thrown upwards and towards the left.