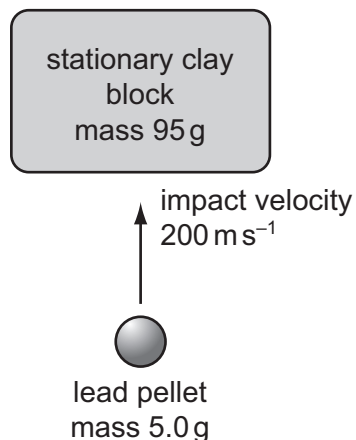


- 14** A lead pellet is shot vertically upwards into a clay block that is stationary at the moment of impact but is able to rise freely after impact.



The pellet hits the block with an initial velocity of  $200 \text{ m s}^{-1}$ . It embeds itself in the block and does not emerge.

How high above its initial position will the block rise?  
(Mass of pellet = 5.0 g; mass of clay block = 95 g.)

- A** 5.1 m      **B** 5.6 m      **C** 10 m      **D** 2000 m

**Space for working**