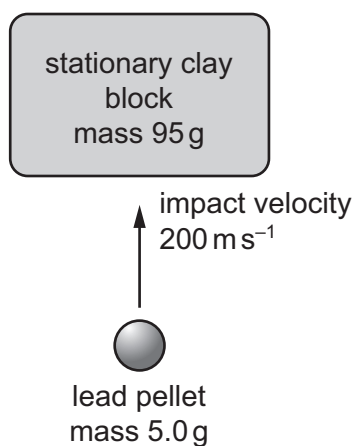


- 10** A lead pellet is shot vertically upwards into a clay block that is stationary at the moment of impact, but is able to rise freely after impact.



The mass of the pellet is 5.0 g and the mass of the clay block is 95 g.

The pellet hits the block with an initial vertical 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?

- A** 5.1 m      **B** 5.6 m      **C** 10 m      **D** 100 m

- 11** Two forces act on an object.

Which diagram represents a couple?

