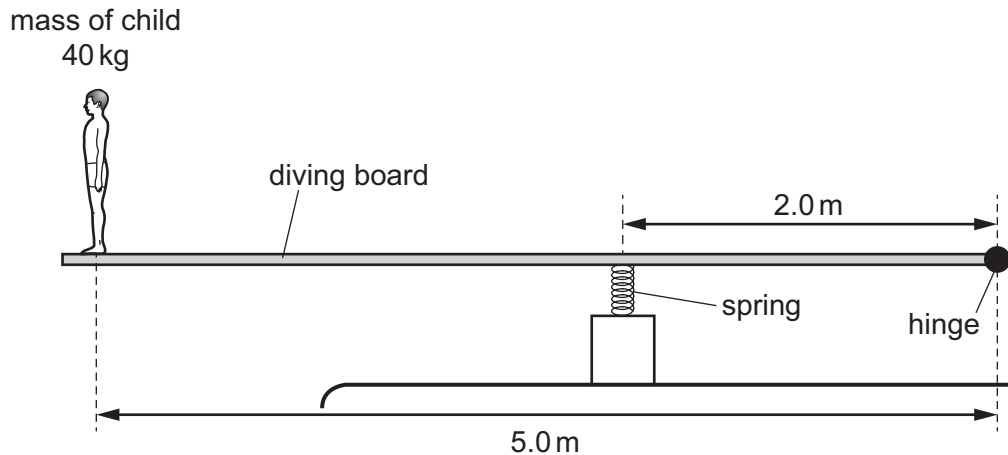13 A diving board of length 5.0 m is hinged at one end and supported 2.0 m from this end by a spring of spring constant 10 kN m⁻¹. A child of mass 40 kg stands at the far end of the board.

mass of child
40 kg

diving board

2.0 m

spring

hinge

5.0 m

What is the extra compression of the spring caused by the child standing on the end of the board?

A 1.0 cm   **B** 1.6 cm   **C** 9.8 cm   **D** 16 cm