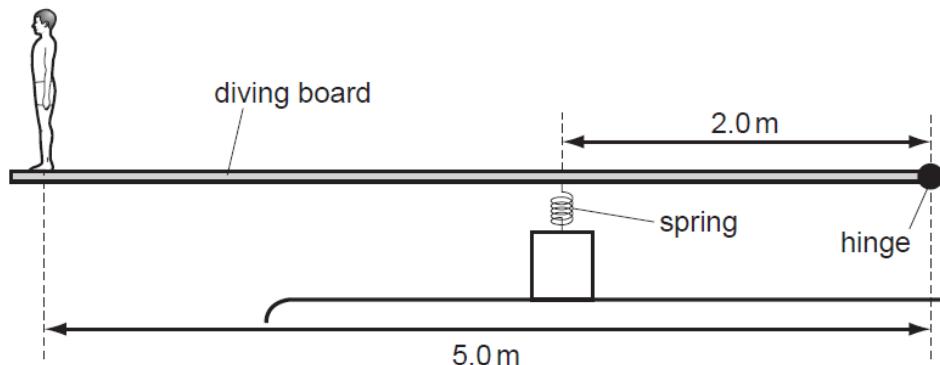


- 5 A uniform diving board of length 5.0 m and mass 50 kg is hinged at one end and supported 2.0 m from this end by a spring of spring constant 10 kN m^{-1} . A child of mass 40 kg stands at the far end of the board.

mass of child

40 kg



What is the extra compression of the spring caused by the child standing on the end of the board? (Assume the diving board remains horizontal with and without the child standing on it.)

A 1.0 cm

B 6.1 cm

C 9.8 cm

D 16 cm