

the board is pivoted at f and a steel spring s holds the board in a horizontal position. The diver weighs 640N and stands still with gravity directly above a point 1.8M from F as shown. Calculate the moment of the weight of the diver.

Solution:

Moment of the weight of the diver is defined as the product of the lever-arm distance d and weight force:

$$M = F \cdot d = 640N \cdot 1.8m = 1152 N \cdot m$$

Answer: moment of the weight of the diver is $M = 1152 N \cdot m$

