

51. We require

$$T = 2\pi\sqrt{\frac{L_o}{g}} = 2\pi\sqrt{\frac{I}{mgh}}$$

similar to the approach taken in part (b) of Sample Problem 16-5, but treating in our case a more general possibility for I . Canceling 2π , squaring both sides, and canceling g leads directly to the result; $L_o = I/mh$.