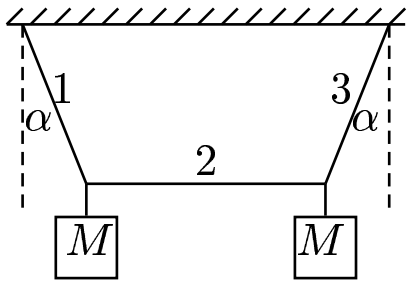
Two identical masses are suspended by the setup shown in the figure. From the symmetry, T_1 , the tension along string 1, has the same magnitude as T_3 , the tension along string 3.



Find T_2 the tension along string 2.

A) $T_2 = T_1 \cos\alpha$

B) $T_2 = T_1 \sin\alpha$

C) $T_2 = 2\,T_1 \cos\alpha$

D) $T_2 = 2\,T_1 \sin\alpha$

By inspection on string 2 there should be a force $T_1 \sin\alpha$ pulling horizontally to the left and an identical force pulling horizontally to the right. So the tension along the string 2 is $T_1 \sin\alpha$.

Answer **B**.

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